

# FM 35-20

U.S.  
DEPARTMENT OF THE ARMY FIELD MANUAL

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FM 35-20  
1950

# PHYSICAL TRAINING WOMEN'S ARMY CORPS



DEPARTMENT OF THE ARMY • JANUARY 1956



FIELD MANUAL  
No. 35-20

DEPARTMENT OF THE ARMY  
WASHINGTON 25, D. C., 25 January 1956

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WOMEN'S ARMY CORPS

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FM 35-20  
1956

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## CHAPTER 1

### INTRODUCTION

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#### **1. Purpose and Scope**

This manual contains reference material for planning and executing physical training programs in the Women's Army Corps. The contents consist of descriptions and illustrations of various types of physical training activities suitable for female personnel. Suggestions for both basic training companies and field detachments are included.

#### **2. Aims of Physical Training**

*a. Personal Welfare.* The primary objective of a physical training program is to develop and maintain standards of physical health, personal hygiene, and personal appearance conducive to the welfare of the individual in accordance with the accepted standards of military service.

- (1) *Health.* Physical health is based on physiological soundness. The absence of anatomical defects or disease, however, does not in itself constitute physical health. Physical health implies enough strength and endurance to meet the demands of normal daily living without undue fatigue and tension. Muscle tone, stamina, agility, and flexibility are components of physical health and well-being. Physical fitness involves the coordination of mind and body which insures quick body response to mental direction. Moreover, physical health cannot be separated from mental and emotional well-being. Attention, therefore, should be given to the mental and emotional state, since ill health can be caused by emotional or mental maladjustment. Competent medical or psychiatric aid may be required for severe problems of this nature, but a program of physical training will do much to insure the physical, mental, and emotional health of the normal individual.
- (2) *Morale.* Personal hygiene involves the practice of good health habits. Good personal hygiene practices result in good mental and physical health, which in turn produces good morale.
- (3) *Personal appearance.* A high standard of personal appearance is required by the military service. Members of the

Women's Army Corps should reflect in their manner the self-confidence which results from a graceful, well-coordinated, well-proportioned body, physical fitness, and the practice of good mental, emotional, and physical health practices.

*b. Social Growth.* A second basic objective of physical training is the personal and social growth of the individual through a development of skills and attitudes which will increase the individual's competence for daily living.

### **3. Specific Objectives**

Certain specific objectives must be the goal of all physical training programs. These objectives are the development and maintenance of—

- a. Good muscle tone.*
- b. Coordination.*
- c. Muscular flexibility and dexterity.*
- d. Muscular strength to meet normal demands.*
- e. Body grace and poise, including correct posture habits.*
- f. Sufficient skill in motor activities to afford a sense of accomplishment and enjoyment in such skill.*
- g. The individual's desire and ability to maintain her own optimum health and well-being.*
- h. The individual's appreciation and mastery of worthwhile physical recreational skills.*
- i. Desirable social attitudes and skills such as cooperation and leadership.*
- j. Personal attitudes of self-confidence, emotional stability, and self-control.*

### **4. Responsibility for the Program**

*a. Unit Commander.* The unit commander is responsible for the physical condition of women in the unit. Therefore it is essential that the commander be aware of the importance of good physical condition and of the activities and methods for attaining it. The commander should be conversant with the overall physical training program so that she can direct and control the program to meet the needs of the women.

*b. Individual.* Since a minimum of time is available for and allotted to physical training in field detachments, responsibility for keeping physically fit falls on the individual. She must be made aware of the need to attain a good physical condition and must be motivated to maintain this condition. The program should be planned to promote skills and interest which will enable the individual to assume the responsibility for her own physical health.

## **5. Physical Training Activities**

A wide variety of physical training activities is available. The choice depends upon the interest of the group, facilities, and equipment available, as well as upon the specific objectives to be met. Unit commanders are responsible for the selection of activities which best meet the needs of the women and the existing conditions. Activities included in this manual are—

- a.* Conditioning Exercises.
- b.* Posture Training and Body Mechanics.
- c.* Team Sports.
- d.* Group Games and Relays.
- e.* Swimming and Lifesaving.

## CHAPTER 2

# PLANNING AND ADMINISTERING PHYSICAL TRAINING PROGRAMS

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### Section I. GENERAL

#### 6. Importance of Planning

Planning is the key to a successful physical training program. The most elaborate facilities and equipment are of little value if no plan exists for their use. However, careful planning and ingenuity can compensate to a large degree for lack of facilities. While the general objectives of physical training remain constant, varying conditions will necessitate emphasizing different aspects of these objectives. Once the entire situation has been evaluated, specific goals for the particular unit should be established from which a plan can be built to conform with the basic objectives of physical training. With the projected plan as a guide, activities will be selected to meet the specific goals. Care should be taken to insure a balance in the program, to use all facilities available, and to meet the needs and interests of the greatest number of women.

#### 7. Detailed Lessons Plans

A detailed lesson plan must be carefully developed for each physical training program period. This detailed plan must consider factors such as personnel, time available, facilities, equipment, climate, weather, and season.

a. *Conditioning Exercises.* The following lesson plan, useful in basic training companies, permits detailed explanation of each activity and provides time for individual attention when assistant instructors are used. Emphasis is placed on learning specific exercises and their purpose, as well as on improving the general physical condition.

Cadence series	Explanation and demonstration—two repetitions	10 minutes
Individual exercises-----	Head circling----- Cross and fly----- Circle-O----- Abdominal pumping----- Deep knee bend----- Foot circling-----	25 minutes
Coordination: Sequence I-----	Three repetitions-----	10 minutes

*b. Conditioning Exercises and Games.* The following lesson plan can be used in almost any situation. It combines body conditioning with group games. The warmup period uses cadence series previously learned in basic training (*a* above). This is followed by exercises to improve the condition of muscle groups selected for specific attention, such as the abdominal muscle groups. The time allotted for individual exercises might well be used to stress relaxing and tension-releasing exercises. The remainder of the period is devoted to either group games or to relay-type activities.

Cadence series	Three repetitions	5 minutes
Individual exercises-----	{ Cross and fly----- Circle-O-----	} 10 minutes
Games-----	Bat ball or selected relays-----	30 minutes

*c. Team Sports.* When team sports constitute the major portion of the program, the following plan may be used. Basketball has been selected as the activity presented here, but the plan may be adapted to the current activity. Following a brief warmup period, a period is provided to improve and practice skills used in the current activity. Time is then provided for actual game participation. This plan is useful in field detachments as a basis for planning practice sessions for detachment teams.

Cadence series	Three repetitions	5 minutes
Skill practice-----	{ Passing----- Shooting-----	} 25 minutes
Games-----	Basketball skirmish-----	25 minutes

*d. Swimming.* Plans for unit swimming usually involve consideration of three classifications of swimmers—the nonswimmer, the novice, and the skilled swimmer. Each group will be engaged in different activities. The following plan is for a group of beginners. This

Review	Pool orientation	5 minutes
Physical and mental adjustment to water.	Entering pool, submerging, etc ..	10 minutes
Buoyancy and rhythmic breathing.	{ Jellyfish float----- Prone float----- Prone glide-----	} 20 minutes
Free swimming-----		10 minutes

plan would follow a period of orientation to the entire swimming course. Separate plans on this order should be set up for the novice and skilled swimmer.

## **8. Progression of Activities**

To be effective, the physical training program must have progression. Progression in individual exercises is accomplished by increasing the number of times the exercise is repeated. The cadence series and coordination sequences are numbered in order of difficulty. Group games are simpler in organization and require less motor skill than organized team sports. For this reason group games should be used as "lead-up" games to team sports.

## **9. Criteria for Selection of Activities**

*a. Needs of the Troops.* The first consideration in planning a physical training program for a specific organization is to determine the physical needs of the women of that organization. Women engaged in sedentary activities should maintain a moderate level of physical fitness. Women in basic training units require a higher level of physical fitness to enable them to perform efficiently.

*b. Facilities and Equipment.* Primary consideration must be given to availability of facilities and equipment in planning a program. For example, swimming cannot be included in the program unless facilities are available. Many sports will necessarily be excluded for the same reason. Lack of facilities and equipment should not be used as an excuse for a narrow, restricted program. Many activities can be adapted to the facilities at hand. Lack of facilities and equipment should serve as a challenge to improve existing conditions.

*c. Time.* The time available for physical training will govern the nature of the program to a great extent. In basic training units, physical training is usually scheduled for approximately 45 minutes, 5 days a week. This permits an intensive program with varied activities throughout the week. In field units, the time allotment is considerably less, usually about 60 minutes per week. This permits a much less intensive program. Opportunity to gain knowledge of activities and skills to be used in the recreational program should be included in the physical training program with the field unit.

*d. Weather.* Weather exerts a marked effect upon the selection of activities. Snow, rain, mud, and extremely cold weather limit activities that can be carried on outdoors. If weather forces the program indoors, choice of activities will depend upon the facilities available.

*e. Interest of the Women.* A successful physical training program depends upon cooperation and energetic participation of the women.

The inclusion of popular activities such as sports, games, and swimming is one of the most effective ways of gaining cooperation. The program should not be limited to activities with which the women are already familiar, since contact with new games and the learning of new skills will broaden interests. Regardless of interest in a specific activity, the improvement of the physical condition is of prime importance.

*f. Skill of the Group.* The skill of the group is a factor in determining the choice of activities. If the majority of the women lack proficiency in motor skills, the program must be planned to include many activities which will raise the level of performance. A highly skilled group, on the other hand, will lose interest unless the program challenges their abilities. In some cases it may be necessary to plan a bilateral program to meet the varying levels of skills.

*g. Size of the Group.* The number of women participating has a direct influence on the program. It is advisable to divide large groups into small units. This permits the use of limited areas or equipment, allows maximum control, makes it possible to include individual activities, and permits an instructor to give individual assistance, particularly in posture training. For most efficient instruction the class should be limited to platoon size or smaller.

## **Section II. BASIC COMPANIES AND FIELD DETACHMENTS**

### **10. Physical Training in Basic Companies**

*a. General.* Physical training in basic training companies must of necessity be rather intensive. The level of physical fitness of women who enter the service must be raised quickly to enable them to meet the demands of basic training. In addition, improvement of body symmetry and the development of flexibility, grace, and co-ordination are desired. A knowledge of body mechanics is still another objective of basic training. Since groups are relatively large and a maximum of physical fitness must be accomplished within a limited period of time, conditioning exercises compose the major portion of the program. If weather permits, some time is devoted to swimming and organized sports.

*b. Suggested Programs.* On a basis of 33 hours of physical training during an eight-week basic training cycle, the following scope is suggested:

(1) *Winter.*

1 hour—Orientation.

2 hours—Posture and Body Mechanics.

22 hours—Conditioning Exercises.

7 hours—Relays and Games.

(2) *Spring and Fall.*

1 hour—Orientation.

2 hours—Posture and Body Mechanics.

18 hours—Conditioning Exercise.

12 hours—Organized Sports.

(3) *Summer.*

1 hour—Orientation.

2 hours—Posture and Body Mechanics.

16 hours—Conditioning Exercises.

14 hours—Swimming.

## 11. Physical Training in Field Detachments

a. *General.* In most field units the time devoted to physical training seldom exceeds 2 hours a week. The program, considerably less extensive than the basic training program, must be extremely flexible. In the field unit, emphasis should be placed on individual maintenance of good physical condition. When scheduled physical training periods are properly used, they will provide the motivation, knowledge, and skill by means of which each woman can maintain for herself an acceptable degree of physical fitness. The physical training program should be designed to provide activities with definite carry-over recreational values.

b. *Suggested Programs.* Since variables occur in field detachments, several types of programs are described below:

(1) *Individual.* In some detachments, scheduling difficulties, extremes in age or interest, or other factors make it advisable to use a system of voluntary participation. Under this system each woman is responsible for engaging in some type of physical activity each week and for reporting her activity to the designated leader. This type of program permits a wide variety of activities, such as bowling, horseback riding, archery, tennis, softball, basketball, or swimming. It may also provide for individual work in posture training, weight control, and other conditioning exercises. Women of all ages should be encouraged to take part in appropriate activity.

(2) *Small groups.* If more control is desired, small groups may be organized under selected leaders. Again a wide variety of activities may be included in the program. However, with organized groups, more control can be exercised over scheduling so that equipment and facilities may be more fully utilized. One method of organizing groups is to schedule various activities and let each woman choose the one in which she wishes to take part. Another method is to let those who desire to work together form small groups and decide on an acceptable activity. Women needing individual help in

weight control or posture training can be assigned to a group that will work under the close supervision of an instructor or supervisor.

(3) *Large groups.* In units where it is practicable to have large groups take part in physical training at one time, the program can be closely regulated. In such units individual sports and activities are not included to any great extent. A balanced program that provides for the needs of the entire group can be devised. Some instruction on conditioning exercises, body mechanics, tension-releasing activities, or posture training should be included in every physical training period. Projected plans should incorporate all these activities, possibly on a monthly rotation basis. In addition, group games and relays should be used to promote interest and enjoyment. If facilities permit, it is advisable to separate skilled members from the group so that they can participate in organized team sports.

## CHAPTER 3

### LEADERSHIP OF PHYSICAL TRAINING PROGRAM

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#### **12. Selection of Leaders**

Leadership determines the success or failure of any enterprise. The best results of physical training can be obtained only if the women participate wholeheartedly. Good leadership is necessary to inspire enthusiastic cooperation. Physical training instructors and their assistants should therefore be selected very carefully.

#### **13. On-the-Job Training**

Complete mastery of physical training requires special training. Not all units will have specially trained instructors. However, potential instructors, selected for their natural aptitude and interest, can be trained on the job to conduct successfully many physical training activities. Unit commanders should arrange a time when these women can meet for instruction and practice. Assistant instructors should be trained to help supervise classes and to assume charge in the instructor's absence.

#### **14. Instructor Qualifications**

*a. Ability To Command Respect.* The good instructor gains the confidence of the women by commanding their respect. She wins their respect through her sincerity, integrity, sense of justice, energy, self-confidence, and force of character.

*b. Understanding of Human Nature.* The successful instructor understands human nature. She recognizes and appreciates physical and mental differences of the women with whom she is working. She learns to know her group as individuals and to recognize quickly their reactions. She is aware of the close bond between good physical and good mental health and realizes its effect on the quality of performance. The better the instructor understands her women and their point of view, the better will be her instruction.

*c. Enthusiasm.* The good instructor is enthusiastic. She believes in the value of her program. The attitude of the instructor is invariably reflected in the attitude of the women.

*d. Knowledge of Subject.* The good instructor knows her subject. She can explain and demonstrate all the activities and knows the best methods of presenting and conducting them. Mastery of the subject is the first step in developing confidence, assurance, and poise. The well-prepared, confident instructor gains the cooperation of her group as quickly as the unprepared, hesitant instructor loses it.

*e. Physical Fitness.* The good instructor should be physically fit in order to exemplify the things she is trying to teach. Since grace, coordination, and physical fitness are the objectives of the physical training program, the instructor herself should be graceful, well-coordinated, and physically fit. The overweight, stoop-shouldered instructor is not apt to inspire the women she is teaching. The instructor who can do all and more than she asks of her classes has a decided advantage.

## 15. Motivation

A successful physical training program must have the full cooperation of all participants. Exercises must be performed precisely and vigorously. Games must be entered into enthusiastically. Without enthusiasm, exercises can be performed so listlessly that no value is derived from them. Since it is impossible to force the women to exercise properly, every effort must be made to provide motivation. Among the methods of motivation that instructors have found successful are —

*a. Emphasizing Personal Welfare.* "Sell" the women the idea that physical fitness will equip them to withstand fatigue in their daily activities and improve their mental and emotional state. When they realize that their efforts are an investment in their own personal welfare, they will cooperate wholeheartedly.

*b. Participating in Activities.* Commanding officers themselves provide one of the best incentives by participating in the physical training program. Participation may mean planning and supervising, coaching or instructing, or actually taking part in activities. When women see that their officers believe in physical training to the extent that they themselves take part, they are motivated to a greater effort. They will usually develop a deeper respect for their officers and a finer *esprit de corps*.

*c. Providing Skilled Leaders.* A leader who is admired and respected obtains the cooperation of the group. The good leader explains the value of the different activities and the reasons why they are included in the program. A good leader does not assume that each one of her women is as skilled or as physically fit as herself. If the women are exercised to the point of becoming stiff and sore, they may develop an apprehensive attitude to subsequent physical training periods. An antagonistic attitude toward the instructor and the program may completely destroy a well-planned, well-organized program. Avoid this attitude by being considerate and using good judgment in presenting the activities.

*d. Using Assistants From the Group.* Women who are chosen as assistants will feel honored, and the group will feel an added sense of participation.

*e. Combining Conditioning Exercises With Sports.* Even though the women realize the value of conditioning exercises, they need additional incentive to put forth their best efforts. Sports furnish this incentive. The women will perform their exercises more conscientiously if the conditioning exercises are followed by stimulating sports and games.

*f. Varying the Presentation of Activities.* Interest may be stimulated by determining which group performs with the best form; by accompanying the exercises with music; by having the women call mass cadence; and by developing new exercises similar to the cadence series or the coordination sequences.

*g. Emphasizing Weight and Body Measurement.* All women are interested in their weight and size, particularly as they grow older. Explain that body measurements may be somewhat reduced by improving muscle tone and that good muscle tone makes a woman appear slimmer even though practically no weight has been lost. This is because soft, flabby muscles occupy more space than strong, elastic muscles. Caution the women, however, that exercise alone will not reduce. Exercise must be accompanied by supervised diet and other good hygienic practices.

## 16. Teaching Techniques

Although every instructor develops from her experiences many techniques and methods of teaching that she has found effective, there are some fundamental suggestions which will be helpful to every instructor.

*a. Look Your Best.* Be and act physically fit. Cultivate the appearance you want your women to have. Be neat, clean, and well-groomed.

*b. Prepare Your Lesson.* Careful preparation will improve your teaching and give you self-confidence. Make a detailed lesson plan far enough in advance to permit thorough familiarity with the subject. Avoid reading from the lesson plan while teaching. This shows lack of confidence, preparation, and knowledge and results in loss of contact with your class.

*c. Check the Equipment and Area.* Has the necessary equipment been assembled? Is the building or area ready?

*d. Prepare for the Class.* If the group is to be divided into teams or subunits, select the leaders of such groups in advance. Plan the method you intend to use in forming the smaller groups.

*e. Move into the Lesson Quickly.* A dynamic beginning arouses interest. If you are not enthusiastic, who will be? Once the class has started, the well-prepared instructor keeps the class moving. She changes quickly from one activity to another. Hesitancy decreases

the effectiveness of instruction and gives the class an opportunity to lose interest in the program.

*f. Emphasize the Positive.* Make corrections affirmatively. Say: "Keep your knees straight," not "Don't bend your knees." When demonstrating exercises, demonstrate the correct form.

*g. Give Praise Where Praise Is Due.* Everyone responds readily to praise. Whenever a woman performs an exercise with exceptionally good form, ask her to demonstrate it before the group. In particular, praise the less skillful performer when occasion merits.

*h. Know Your Women.* The good instructor knows her women. She observes them closely and learns to distinguish between poor performance caused by lack of ability or aptitude and poor performance caused by indifference or lack of effort. Patience and understanding will correct the former; firmness, the latter. Avoid sarcasm and ridicule, but a liberal sprinkling of humor will increase the feeling of unity between yourself and the class.

*i. Keep the Attention of Your Class.* Avoid areas with distractions such as noise, moving vehicles, and dust. When classes are held outdoors, face the class away from the sun and be sure that all members of the class are in a position to see the demonstrations.

*j. Keep it Brief.* Explanations should be brief and to the point; directions, clear and concise. Face the class and speak clearly. Talking too much is a common failure.

*k. Remember the Objectives.* Objectives of the physical training program must be kept in mind constantly.

*l. Encourage Class Participation.* Provide opportunity for questions; use class members for demonstration of skills; allow the class to select leaders and to have a voice in the selection of activities. Using women as officials in games encourages active participation.

*m. Use Demonstration.* Plan and rehearse demonstration to illustrate clearly the techniques taught. Use "Instructor's right" in all presentations.

## CHAPTER 4

### CLASS ORGANIZATION AND FORMATIONS

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#### **17. General**

The degree of formality required in the organization of classes or in the types of formations used depends on the particular situation. When groups are large and time or space is limited, formal methods will produce the best results. Conditioning exercises of a drill nature lend themselves to a formal manner. In conducting other physical training activities better results can be obtained by use of a more informal manner. Always remember that the main purpose behind physical training is physiological benefit, not disciplinary action. Formality in a class tends to suppress the spirit and enthusiasm of the women. Informality, however, must not be confused with lack of control. To make instruction and supervision easier, limit the size of the class to approximately 40 women. If the group is larger than this, it should be divided and assistant leaders used. When planning for large groups, it is sometimes possible to schedule subgroups for different periods.

#### **18. Square or Rectangular Formations**

*a. Use.* The traditional arrangement for physical training activities is the square or rectangular formation. This type of formation is best used when large groups are being instructed. It is simple, easy to form, and readily adaptable to any unit. On the other hand, it is unadaptable to many activities, is extremely formal, and does not permit close individual supervision.

*b. Directions for Forming.* The square or rectangular formation is developed from a column. Frontage of the column should not exceed six women at close interval. The instructor should take her place 12 to 15 feet from the class. A platform for the instructor will allow the whole class to see the demonstrations clearly.

*c. Commands for Preparation of Class for Exercises (From a Column Formation).*

- (1) EXTEND TO THE LEFT—MARCH!----At this command the women on the right flank stand fast, with their left arms extended at shoulder level; all other women raise both arms shoulder level, eyes right, and move quickly to the left until there is at least 12 inches between the fingertips of each woman and those of the woman on her right.

- (2) ARMS DOWNWARD—MOVE!----The arms are lowered sharply to the sides.
- (3) LEFT FACE!
- (4) EXTEND TO THE LEFT—MARCH!----Women repeat the movement of EXTEND TO THE LEFT until the entire column has extended depthwise.
- (5) ARMS DOWNWARD—MOVE!
- (6) RIGHT FACE!
- (7) FROM FRONT TO REAR—COUNT OFF!----At this command all women in the front row simultaneously count “ONE”; in quick succession the second row counts “TWO”; and so on until each woman has a number. There will be as many numbers as there are rows.
- (8) EVEN NUMBERS TO THE LEFT—UNCOVER!----All even-numbered women take one jump to the left.
- (9) DRESS AND COVER!
- (10) SITTING POSITION—TAKE!----The class takes a sitting position and is now ready for instruction.

*d. Commands for Execution of Exercises.*

- (1) ERECT STAND—COME!----Stand with feet in position of attention, rise on toes, spreading heels apart until feet are parallel (6 inches apart).
- (2) STRIDE POSITION—JUMP!----Jump to a stride position, feet 18 to 24 inches apart.
- (3) BACK LYING POSITION—TAKE!----The class assumes the back lying position as described in paragraph 24a.
- (4) EXERCISE POSITION—TAKE!----Class assumes the position for the selected exercise.
- (5) EXERCISE—BEGIN!----Count for exercise start immediately.
- (6) EXERCISE—CEASE!----Stand or sit at a relaxed position of attention.

*e. Commands for Assembling.*

- (1) STANDING POSITION—TAKE!----This command is given only if the class is in sitting or lying position.
- (2) CLASS—ATTENTION!----Always call the class to attention before assembling.
- (3) ASSEMBLE TO THE RIGHT—MARCH!----At this command, all return on the double to their original positions at normal distance and interval.

## 19. Circle Formation

*a. Use.* The circle formation may be used for conditioning exercises, particularly when assistant instructors are used. Circles should not contain more than 40 people. With groups larger than this, con-

centric circles may be used. The circle should be used when an informal atmosphere is desired. It is of particular value in group games or exercises to improve ball-handling skills.

*b. Commands.* To form a circle simply and quickly, command the women to "join hands and form a circle." More formal methods may be used, but informal commands maintain the natural informality of the circle formation. Once the circle has been formed, the instructor takes her position either at the side of the circle or in the center. To avoid standing with her back to any part of the class, the instructor gives her commands from the side of the circle. In supervising, she may stand in the center or walk around the outside.

## **20. Division Into Smaller Formations**

It is sometimes advisable to divide a large group into smaller groups, each with its own instructor. Either the square or circle formation may be used. If groups are small enough, no particular formation is necessary. Simply assign each group an area within which it may move as the activity permits. Small groups increase the possibility of individual supervision. This is particularly important when conditioning exercises are being conducted. In other activities, particularly team sports and swimming, small groups permit the practice of specific skills. Thus skilled women can perfect techniques while novices work on basic principles. Each group proceeds at its own speed.

## CHAPTER 5

### CONDITIONING EXERCISES

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#### Section I. GENERAL

##### **21. Types**

*a. Individual.* Individual exercises (pars. 25-32) are designed to aid in the conditioning and development of specific body areas. The time, amount, and progression of these exercises can be easily controlled by the instructor. The time spent on the development of each muscle group can be regulated in proportion to the demand placed on that group. In this way muscles not normally used a great deal can be kept in a state of good muscle tone, creating overall fitness. Exercises to develop flexibility are also considered individual developmental exercises. Their purpose is to limber the joints, giving them the full range of movement that grace requires.

*b. Cadence Series.* Cadence series (pars. 33-36) are designed to provide exercise for every large muscle group in the body. The first exercise is based on arm swinging; the second, on arm flinging; and the series then progresses downward from the neck muscles to the shoulders, the trunk, and the legs. When done in quick cadence, these exercises may be used as a warm-up. If performed more slowly and with precision, they may serve as developmental exercises. There are four different cadence series from which to choose. The use of different series provides variety to the conditioning exercises.

*c. Coordination Sequences.* Coordination sequences (pars. 37-39) assist in the development of coordination of mind and body. Their difficulty lies in the concentration required for their performance rather than on physical strain. The quick body response to mental direction demanded by drill and field training activities makes the coordination sequence particularly important for basic training units, but the value of synchronization in all phases of work makes these sequences useful in field detachments as well. Three different series are specified and provide a choice of exercises.

##### **22. Evaluation**

Conditioning exercises are used to a great extent in basic training units (par. 10). Field detachments (par. 11) will find them useful as well, since they are adaptable to varying circumstances.

*a. Advantages.* Conditioning exercises—

- (1) Can be conducted anywhere.
- (2) Require no equipment.
- (3) Are suitable for groups of various sizes.

- (4) Are readily adaptable to physiological differences.
- (5) Can be regulated with regard to time, amount, and progression.
- (6) Can reach and develop any desired muscle group in the body.
- (7) Offer a maximum of class control.
- (8) Are the quickest method of raising the standard of physical fitness to a desired level.

*b. Disadvantage.* The greatest disadvantage of conditioning exercises is their lack of appeal to most women. This difficulty can be overcome through good leadership and planning on the part of the instructor to maintain a balance between conditioning exercises and other physical training activities.

## 23. Instruction

Maximum value will be derived from the exercises only if the instructor organizes the class well, gives commands clearly and precisely, and holds the class to set standards of attainment.

*a. Formations.* The square or rectangular formation (par. 18) is generally used for the formal instruction of conditioning exercises. If groups are small and informal, the instructor may add variety to the program by using a circle formation (par. 19).

*b. Sequences.* At the initial presentation of a cadence series (par. 21b) or a coordination sequence (par. 21c) it is best to demonstrate the entire set of exercises as a whole. Following this original demonstration each exercise is presented by itself; explanation and demonstration being given simultaneously with the class performing the exercise as the explanation is given. The entire group of exercises is then performed as a whole. In subsequent classes, two or three exercises may be reviewed together or the entire group may be reviewed as a unit.

*c. Commands.* To avoid confusion, commands for each exercise should be consistent. Both the instructor and the class must have a complete understanding of each command. Paragraph 18 contains general commands for the organization and conduct of classes. Commands for the execution of specific exercises will be found with the description of each exercise.

*d. Execution of Exercises.* The instructor must insist upon proper execution of each exercise, since conditioning exercises lose much of their value unless performed exactly as prescribed. Considerable time and effort must be taken in the early stages to insure that each woman learn the exercise correctly. Additional time and patience are required to attain perfection in the execution of conditioning exercises.

*e. Cadence.* After the exercises have been learned properly, they should always be given in cadence. The cadence should be set before

beginning the exercise. It may be counted by the instructor, her assistant, or the entire group. The cadence varies with the different exercises.

## 24. Exercise Positions

Certain positions are used for the execution of conditioning exercises. The positions described below are those used for the exercises given in this manual.

- a. *Back Lying.* Lying on the back, face up, body outstretched.
- b. *Erect Stand.* Feet about 12 inches apart (outside border to outside border), toes and heels parallel.
- c. *Stride Stand.* Feet well separated, at least 18 to 24 inches, arms at sides.
- d. *Long Sitting.* Seated position, legs outstretched and together, back straight.
- e. *Lunge Position.* Standing position with wide spread of legs, one leg forward, back leg straight, and the body weight on the front leg, with the knee well bent.
- f. *Arms at Forward Bend.* Elbows bent and held closely to the sides, fists clenched and placed on the chest.
- g. *Erect Position.* Standing position, arms at the sides, feet together.
- h. *Demonstration Position.* Sitting position taken by the class in order to see demonstration.

## Section II. INDIVIDUAL EXERCISES

### 25. General

The number of available individual exercises is unlimited. Examples of appropriate exercises for each muscle group are included here. If additional exercises are desired for variety, sections of the cadence series or coordination sequences may be used.



Figure 1. Head circling.



Figure 2. Push back.

*b. Push Back (fig. 2). Upper back.*

- (1) *Starting position.* Erect stand, fingertips on base of head, elbows slightly above shoulder level.
- (2) *Movement.* Force elbows backward slowly and push backward and upward with head. Relax. Keep head erect throughout the exercise without extreme pushing up or back.
- (3) *Count.* Back and relax.

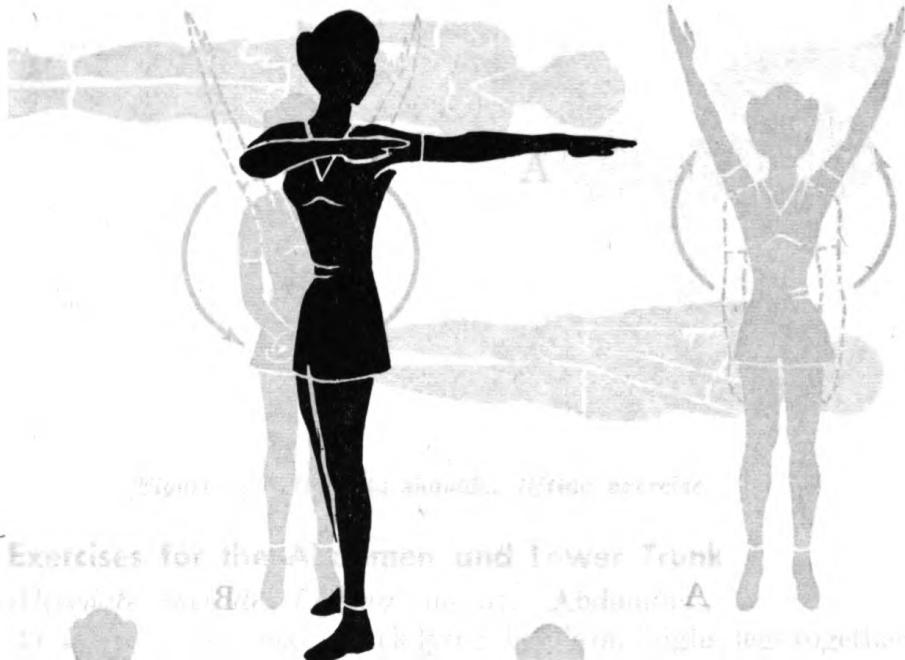
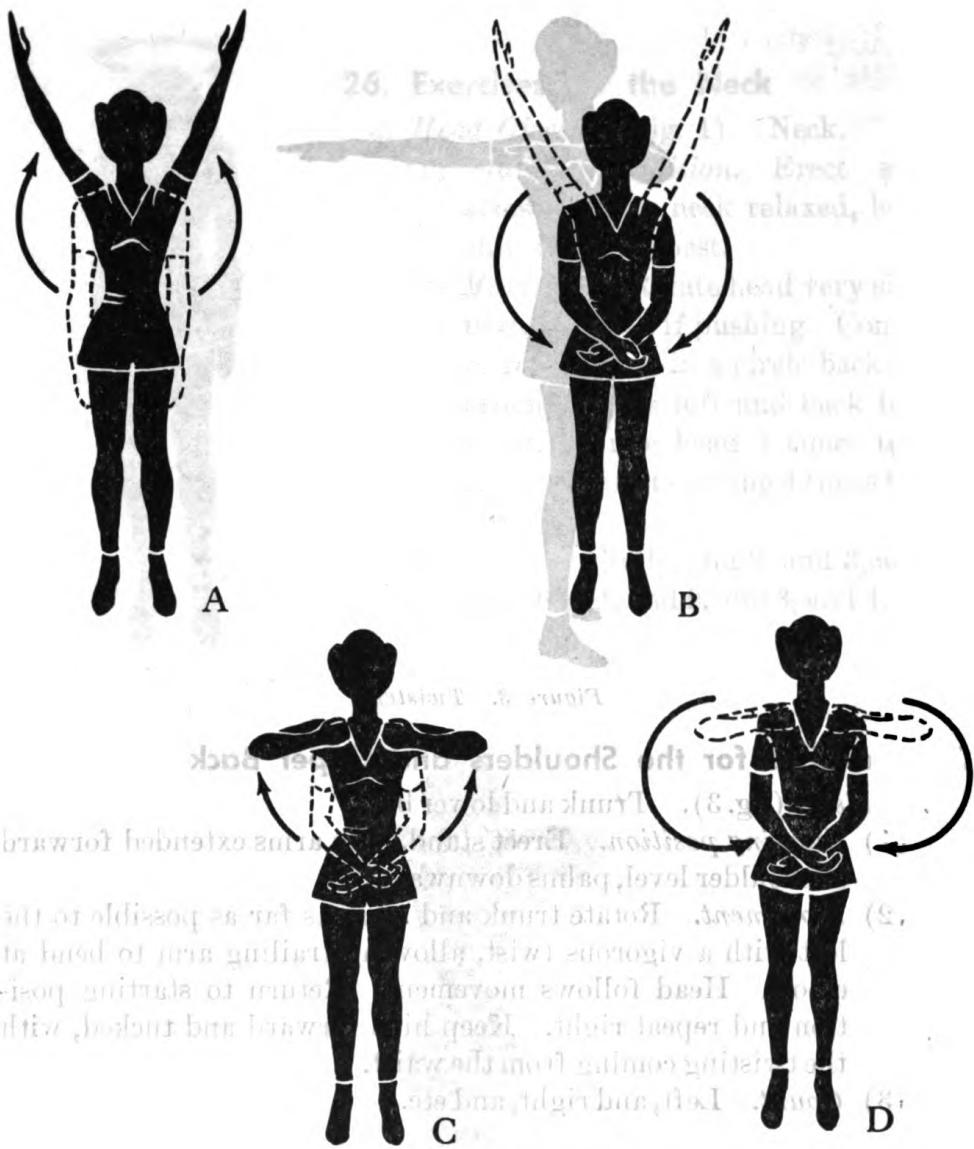


Figure 3. Twister.

## 27. Exercises for the Shoulders and Upper Back

a. *Twister* (fig. 3). Trunk and lower back.

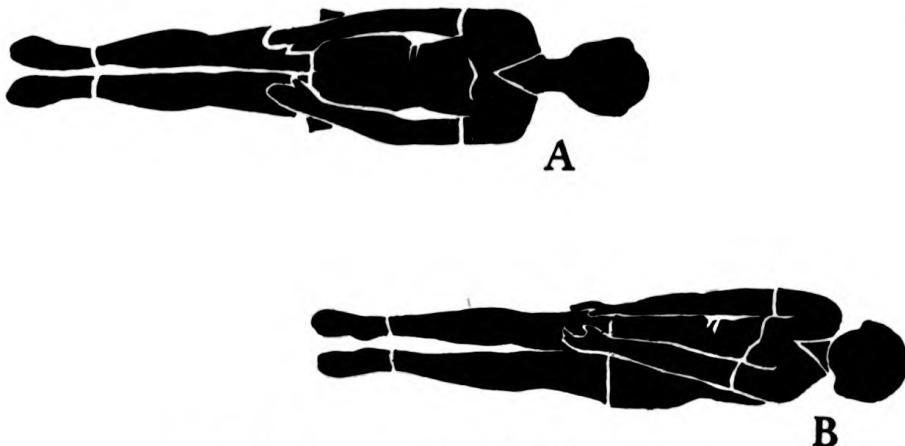
- (1) *Starting position.* Erect stand, both arms extended forward at shoulder level, palms downward.
- (2) *Movement.* Rotate trunk and arms as far as possible to the left with a vigorous twist, allowing trailing arm to bend at elbow. Head follows movement. Return to starting position and repeat right. Keep hips forward and tucked, with the twisting coming from the waist.
- (3) *Count.* Left, and right, and etc.



*Figure 4. Cross and fly.*

b. *Cross and Fly* (fig. 4). Upper arms and upper back.

- (1) *Starting position.* Erect stand, arms at sides.
- (2) *Movement.* Fling arms sideward and upward to a position diagonally above the shoulders, palms upward (fig. 4a). Drop arms downward in a relaxed manner so that the elbows are close to the body with the forearms crossing low in front of the body (fig. 4b). Lift elbows to shoulder level and force back vigorously with arms bent inward, fists clenched (fig. 4c). Relax the arms and swing them low in front of the body (fig. 4d). Perform the exercise in one continuous movement, pausing only when forcing arms back at shoulder level.
- (3) *Count.* Fling, cross, pull, and relax.



*Figure 5. Alternate shoulder lifting exercise.*

## 28. Exercises for the Abdomen and Lower Trunk

### a. Alternate Shoulder Lifting (fig. 5). Abdominal.

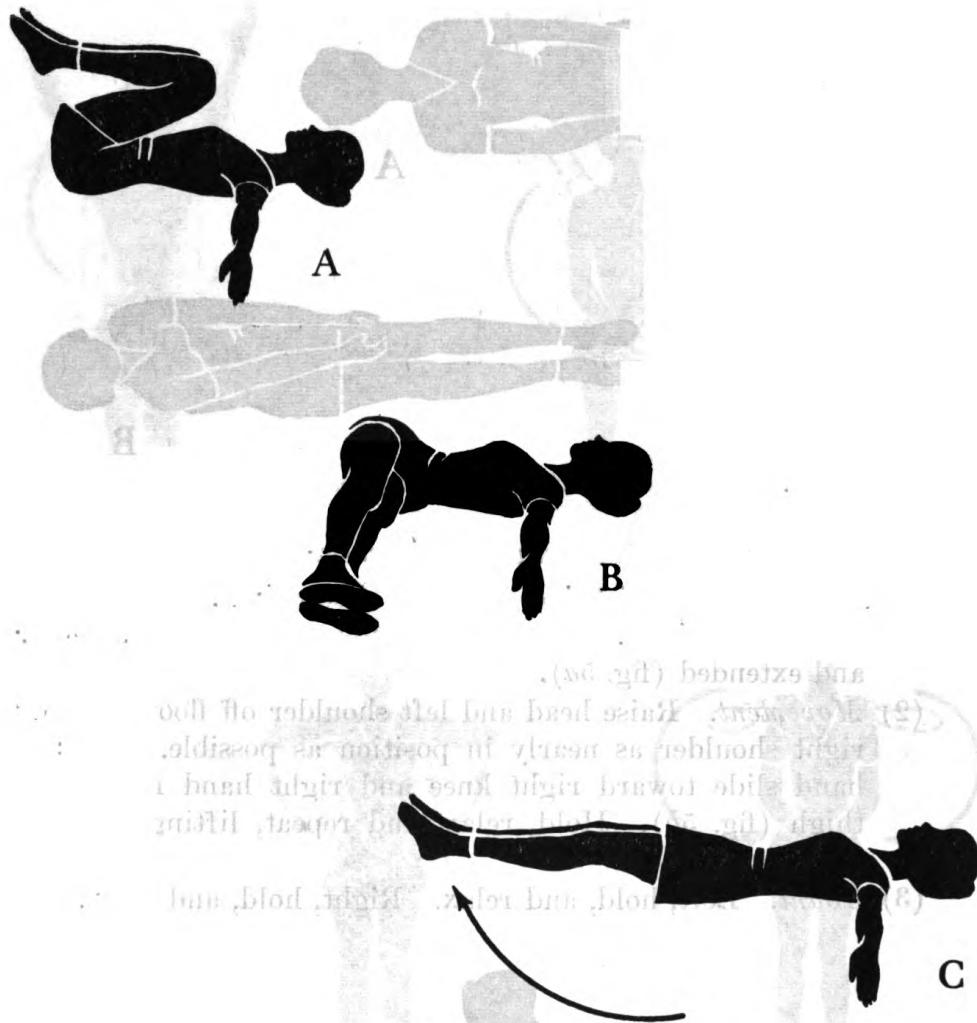
- (1) *Starting position.* Back lying, hands on thighs, legs together and extended (fig. 5a).
- (2) *Movement.* Raise head and left shoulder off floor, keeping right shoulder as nearly in position as possible. Let left hand slide toward right knee and right hand remain on thigh (fig. 5b). Hold, relax, and repeat, lifting opposite shoulder.
- (3) *Count.* Left, hold, and relax. Right, hold, and relax.



*Figure 6. Sit-up exercise.*

### b. Sit Up (fig. 6). Abdominal and lower back.

- (1) *Starting position.* Sitting position, knees up, feet flat on floor, arms clasped around knees, and back rounded.
- (2) *Movement.* Release arms and, with back rounded, rock backward until only shoulders and head remain off the floor. Return immediately to starting position by contracting the abdominal muscles. Do not attempt to lift the body by use of the arms. Keep feet flat on floor at all times.
- (3) *Count.* Back and up. Repeat.



*Figure 7. Circle-O.*

c. *Circle-O* (fig. 7). Abdominal.

- (1) *Starting position.* Back lying, knees bent close to chest, feet together, arms extended sideward at shoulder level, and palms down (fig. 7a).
- (2) *Movement.* Roll on left hip, extending legs parallel with arms (fig. 7b). Swing legs around to a forward position (fig. 7c). Return knees to chest. Repeat right. With legs held no more than 6 inches from the floor, swing them around in a circular motion. Do not begin swing until the legs are fully extended.
- (3) *Count.* Left, extend, circle, and up. Repeat right. Perform the exercise to a very slow count.



Figure 8. *Sitting walk.*

## 29. Exercises for the Hips

a. *Sitting Walk* (fig. 8). Hips and thighs.

- (1) *Starting position.* Long sitting, arms folded one on top of the other and held in front of the chest, shoulder level, with back held straight.
- (2) *Movement.* Keeping the back straight, walk forward by alternately extending the left and right legs, rolling weight to each hip. Repeat, moving backward.
- (3) *Count.* Forward, 2, 3, 4, 5, 6; back, 2, 3, 4, 5, 6; forward, 2, 3, 4, 5; back, 2, 3, 4, 5. Decrease count one number each time the exercise is performed.

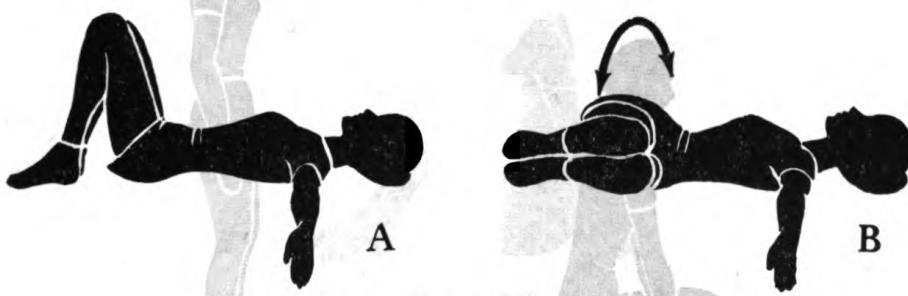
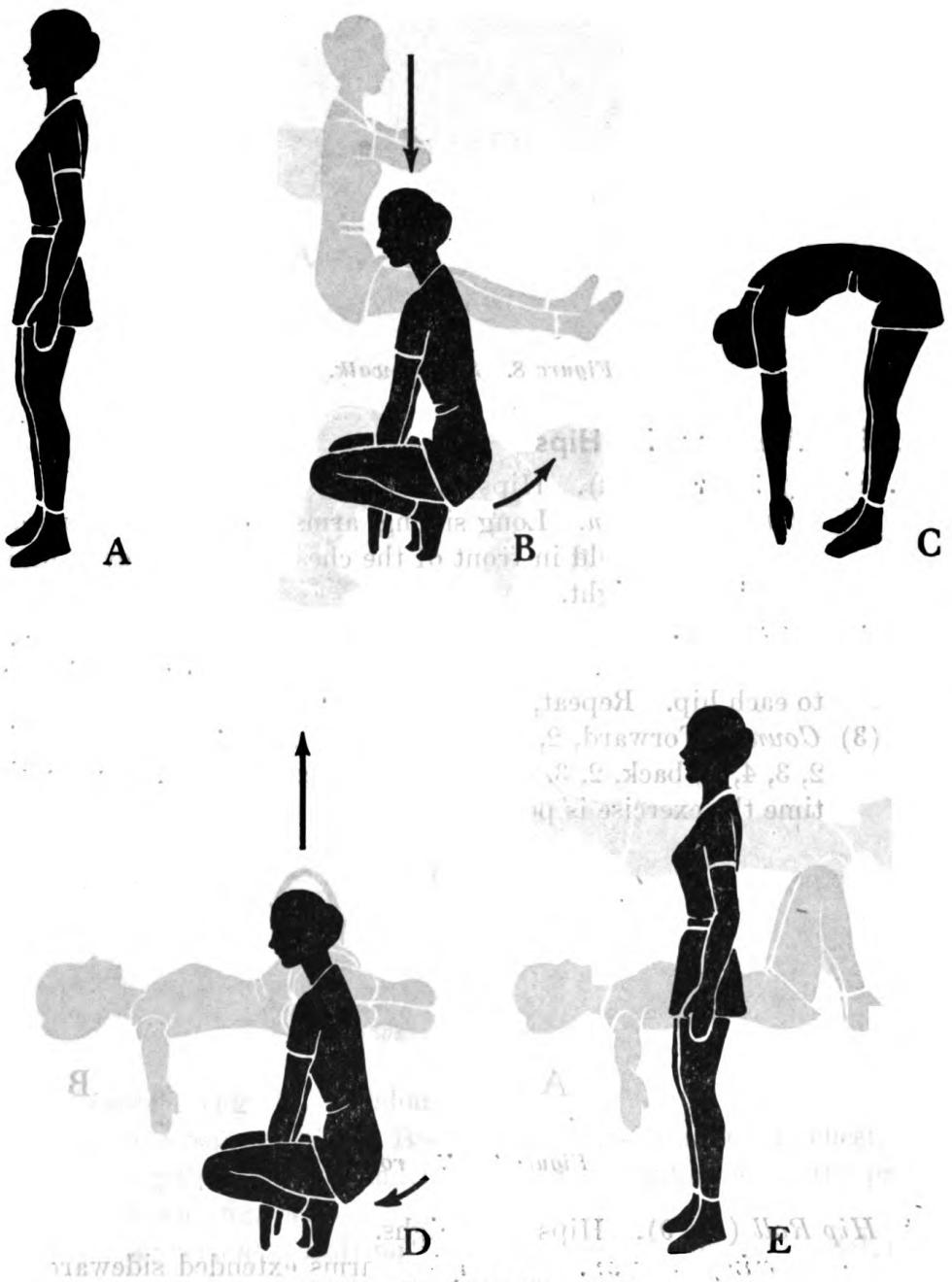


Figure 9. *Hip roll.*

b. *Hip Roll* (fig. 9). Hips and thighs.

- (1) *Starting position.* Back lying, arms extended sideward at shoulder level, palms down. Keeping the knees flexed, place the feet flat on the floor with the heels as close to the hips as possible (fig. 9a).
- (2) *Movement.* Roll over on left hip, touching the left thigh, knee, leg, and outer border of left foot on the floor. Right leg and foot should remain on top of left. Hands, arms, and shoulders remain in place (fig. 9b). Return to starting position and repeat right. When rolling from side to side, keep feet in contact with floor.
- (3) *Count.* Left and, right and, etc.



*Figure 10. Deep knee bend.*

### 30. Exercises for the Legs

a. *Deep Knee Bend* (fig. 10). Thigh and calf.

- (1) *Starting position.* Erect stand, arms at sides (fig. 10a).
- (2) *Movement.* Bend knees, touching finger-tips to the floor (fig. 10b). Straighten knees, fingers remaining on the floor (fig. 10c). Return to deep knee bend position (fig. 10d). Rise to erect stand position (fig. 10e).
- (3) *Count.* 1-2-3-4-5-6-7-8. Repeat.



Figure 11. Trunk bending.

b. *Trunk Bending* (fig. 11). Lower back, hips, thighs, and calves.

- (1) *Starting position.* Erect stand.
- (2) *Movement.* Keeping the knees straight, bend trunk forward, grasp ankles, and pull the chest toward the thighs in a bouncing motion. Return to erect stand position.
- (3) *Count.* Bend, 2-3-and up. Repeat. Do not perform more than 6 times without a short rest.



Figure 12. Transverse arch pull.

### 31. Exercises for the Feet

a. *Transverse Arch Pull* (fig. 12). Strengthen weak arches by developing the muscles around the arches.

- (1) *Starting position.* Sitting, with hands braced behind back, knees bent, feet flat on the floor approximately 6 inches apart, back straight.
- (2) *Movement.* Pull toes under. Grip and relax at least 15 or 20 times.
- (3) *Count.* Grip and relax.



Figure 13. Foot circling.

b. *Foot Circling* (fig. 13). Ankles.

- (1) *Starting position.* Sitting, with hands braced behind back, knees bent, feet flat on the floor.
- (2) *Movement.* Extend the left leg so that the foot clears the floor and describes a full circle by completely extending the foot downward, inward, and upward. Repeat with the other foot. Perform exercise 10 times with each foot.
- (3) *Count.* Circle 2-3-4-5-6-7-8 change. Right 2-3-4-5-6-7-8. Make one complete circle of the foot for each count.

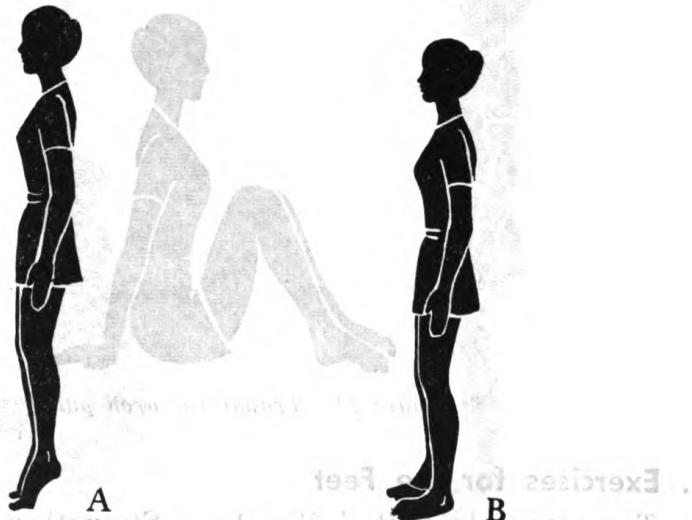


Figure 14. Heel lifting.

c. *Heel Lifting* (fig. 14). Feet and ankles.

- (1) *Starting position.* Erect stand.
- (2) *Movement.* Rise on toes (fig. 14a) and return to starting position. Shift weight to outer borders of feet (fig. 14b) and return to starting position. For variety, combine the movement by rising on the toes, shifting weight to the outer borders of the feet, and returning to the starting position.
- (3) *Count.* Toes down, borders down. Count for combination is toes, border, down.

## **32. Exercises for Release of Tension**

Tension-releasing exercises may involve a single muscle group or the entire body. Although the neck, shoulders, and lower back are generally most vulnerable, any portion of the body may fall prey to tenseness. Release of tension is accomplished by controlled relaxation.

*a. Whole Body Release.* Use any cadence series, preferably I or II, (pars. 33 and 34). If variety is desired, a series may be made by selecting any one exercise from each group of individual exercises. Thus an individual may choose those exercises she likes to perform and originate her own series. When exercises are used for relaxation, they should be done slowly with concentration on relaxing between movements rather than on precise execution.

*b. Progressive Relaxation.* Lie down. Extend both arms overhead and stretch completely throughout the body. Relax the entire body, beginning with the fingers and let the feeling of relaxation flow through the body to the toes. This exercise may be used to induce sleep.

*c. Neck Release.*

- (1) Head lowering forward and backward (cadence series I, par. 33b(3)).
- (2) Shoulder lifting (cadence series I, par. 33b(4)).
- (3) Head turning (cadence series II, par. 34b(3)).
- (4) Head nodding and turning (cadence series III, par. 35b(3)) and individual exercises, paragraph 26a.
- (5) Shoulder circling (cadence series IV, par. 36b(4)).
- (6) Head swinging and circling (cadence series IV, par. 36b(3)).

*d. Lower Back Fatigue.*

- (1) Trunk springing forward and stretching upward (cadence series I, par. 33b(5)).
- (2) Alternate trunk stretching and bouncing (cadence series IV, par. 36b(6)).

*e. Foot Relaxation.*

- (1) Foot circling (individual exercises, par. 31b).
- (2) Transverse arch pull (individual exercises, par. 31a).

### Section III. CADENCE SERIES

#### 33. Cadence Series I

a. Starting Position. Stride stand.

b. Movement.

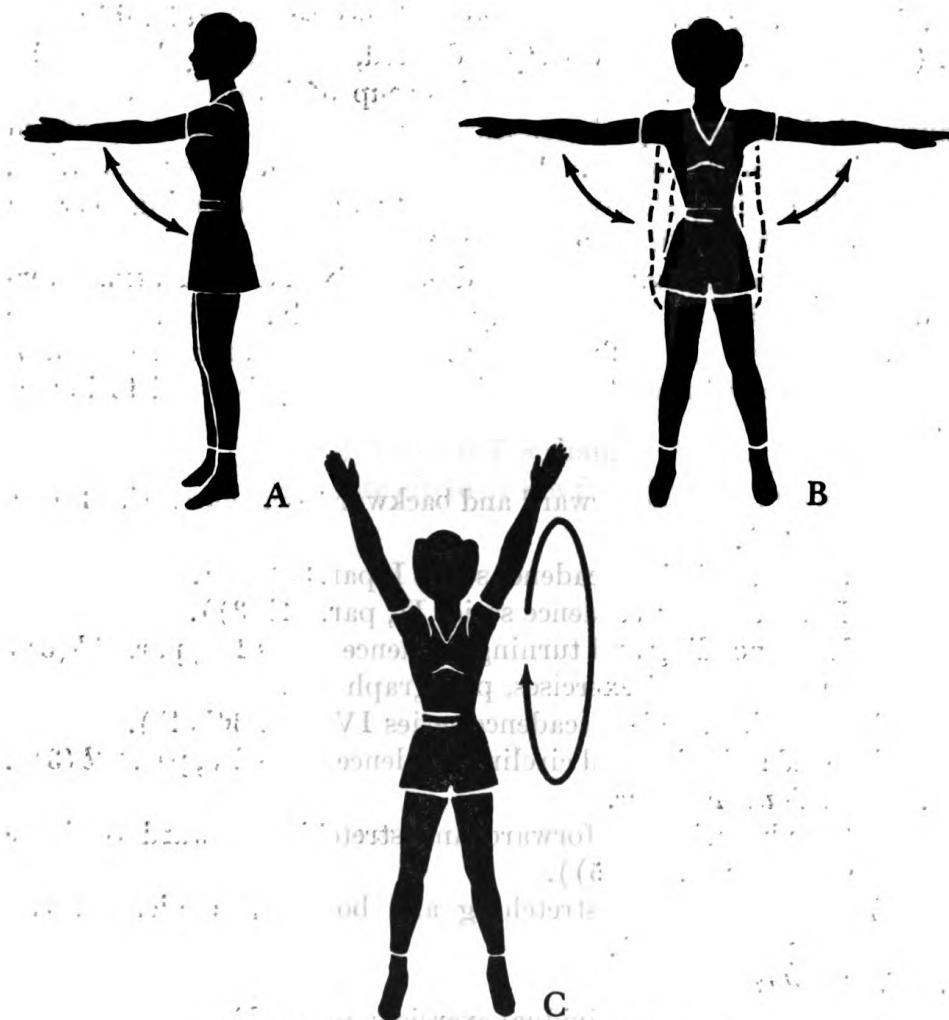
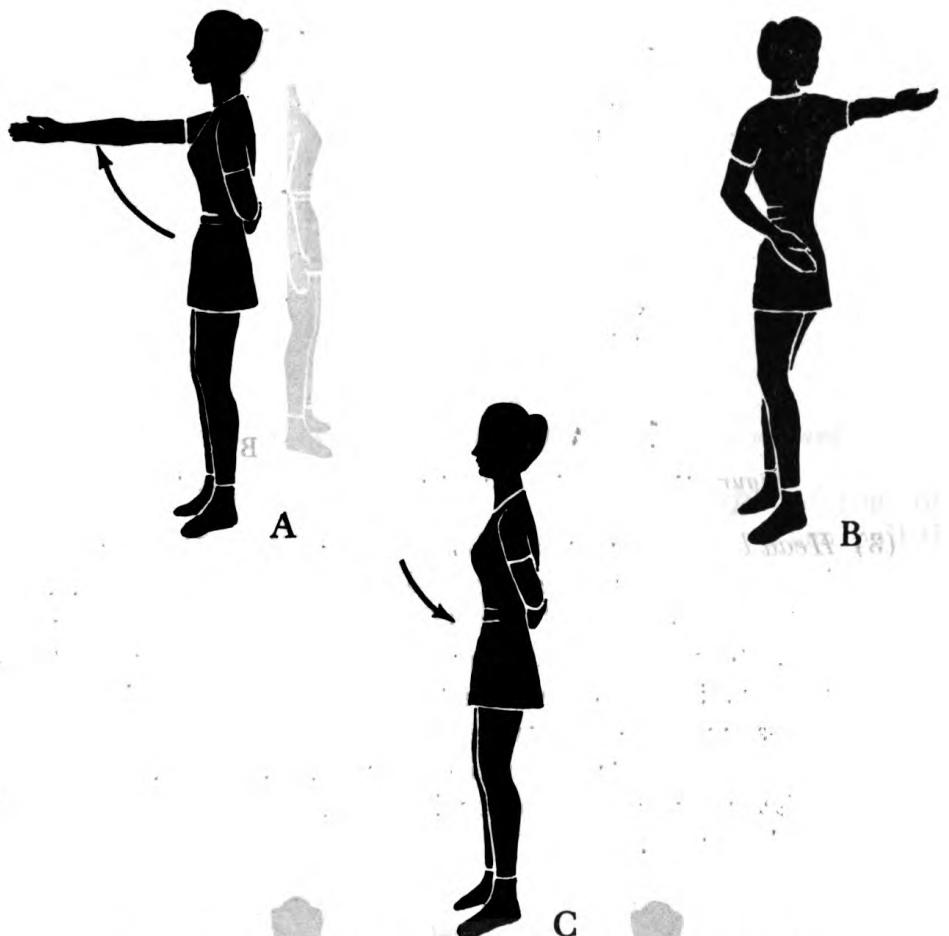


Figure 15. Arms swinging forward and upward.

(1) *Arms swinging forward and downward* (fig. 15). Swing arms forward to shoulder level (fig. 15a). Swing arms down to sides. Swing arms sideward to shoulder level (fig. 15b). Swing arms down to sides. Perform these 4 swings in a continuous movement 7 times. The hands brush the skirt as they pass through the starting position.

*Transition.* Circle arms forward, up, back, and down twice and place right arm behind back (fig. 15c).

*Count.* Forward and side, and 2 and side, and 3 and side, and up to 7 and side, and circle, circle.

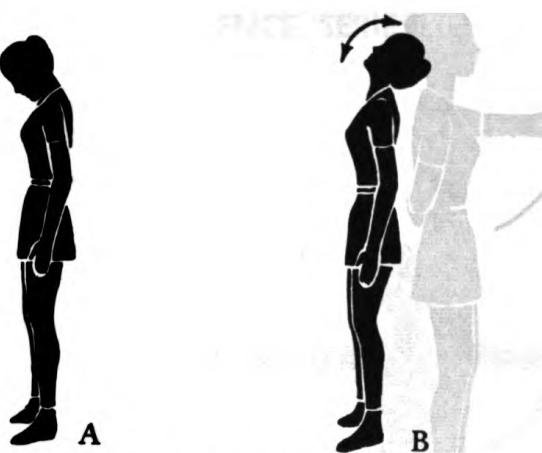


*Figure 16. Single arm swinging forward and flinging back.*

(2) *Single arm swinging forward and flinging back* (fig. 16). Placing the left arm behind the back, swing the right arm forward to shoulder level (fig. 16a). Fling the right arm at shoulder level as far toward the back as possible (fig. 16b). The upper body twists to the right from the waist as the head follows the action of the right arm. Return the right arm to the forward position. Swing the right arm down to the side (fig. 16c). These 4 movements are performed as a continuous movement. The swinging arm should not drop below shoulder level on the fling. The action is performed 4 times with the right arm and 4 times with the left arm; 4 with the right, 4 with the left. The change to the left arm is accomplished on the last swing while placing the right arm behind the back.

*Transition. Arms at side.*

*Count.* Forward fling, forward down; 2 fling, forward down; and up to 4 fling, forward change; right fling, forward down. Continue to count 4 and repeat the exercise.

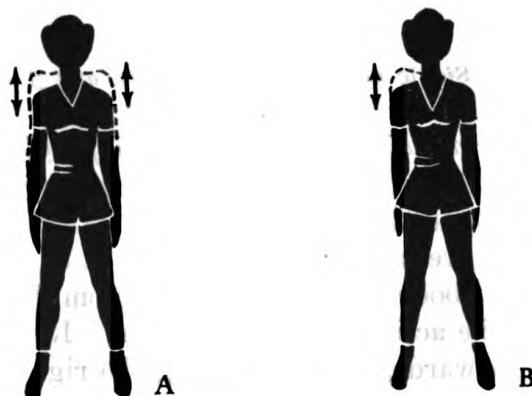


*Figure 17. Head lowering forward and backward.*

(3) *Head lowering forward and backward* (fig. 17). Drop head forward to chest (fig. 17a). Lift head to normal position. Drop head backward (fig. 17b). Lift head to normal position. These 4 positions are performed as 2 movements; a forward drop followed by a backward movement of the head. Repeat movements 8 times.

*Transition.* Head returns to normal position.

*Count.* Forward and back; and 2 and back; and up to 7 and back; and 8 up.



*Figure 18. Shoulder lifting.*

(4) *Shoulder lifting* (fig. 18). Lift both shoulders simultaneously 8 times in succession (fig. 18a). Relax. Repeat movement 8 times, using only left shoulder. Repeat movement 8 times, using only right shoulder (fig. 18b). Repeat movement 8 times, alternating left and right shoulders.

*Transition.* Shoulders in normal position.

*Count.* 1 and 2 and 3 and 4 and up to 8; and left and 2 and 3 and 4 and up to 8; and right and 2 and 3 and 4 and up to 8; and left and right and 3 and 4 and up to 8; and . . .



*Figure 19. Trunk swinging forward and stretching upward.*

(5) *Trunk swinging forward and stretching upward* (fig. 19). Bend the trunk forward as far as possible. Then pull the head and trunk farther down with a bobbing motion 4 times. Roll the trunk up slowly, the head being the last to come up to the starting position in 4 counts. Repeat these movements consecutively 8 times.

*Transition.* As the body is raised to the starting position the last time, make a quarter turn left and bring feet together.

*Count.* Relax 2-3-4; up-2-3-4; 2-2-3-4; up-2-3-4; 3-2-3-4; up-2-3-4; to 8-2-3-4; up-2-3-turn.

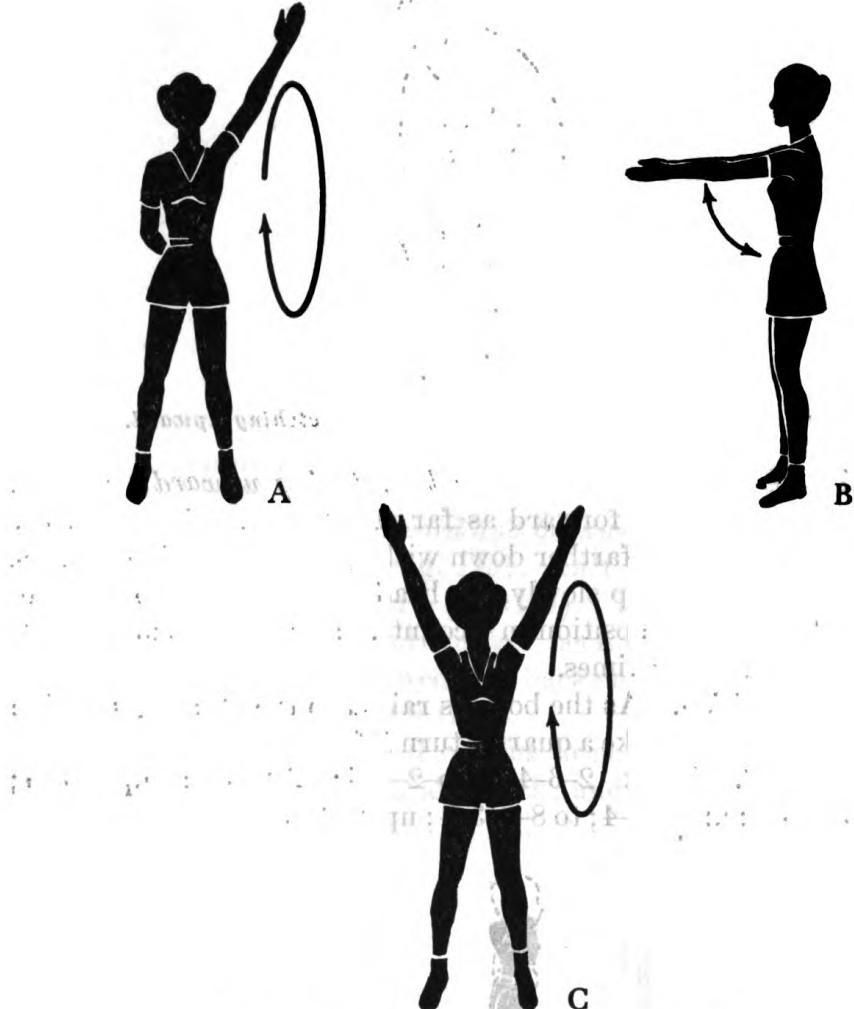


*Figure 20. Bouncing.*

(6) *Bouncing* (fig. 20). With the knees slightly bent, push with the toes and bounce a few inches off the floor. Make 4 bounces in each direction, making a quarter turn left after each fourth bounce until facing the front.

*Transition.* The series ends in erect standing position facing original direction.

*Count.* Bounce 2-3-4; turn 2-3-4; turn 2-3-4; turn 2 and stop.



*Figure 21. Single and double arm circling.*

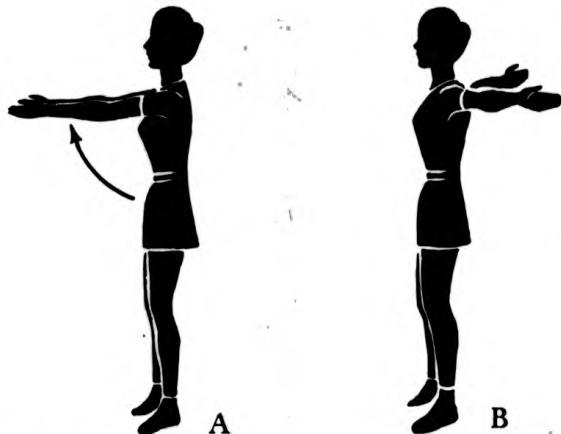
### 34. Cadence Series II

- a. *Starting Position.* Stride stand, right hand behind back.
- b. *Movement.*

(1) *Single and double arm circling* (fig. 21). Swing left arm in a circle, keeping it as close to the body as possible, forward, up, back, and down 6 times (fig. 21a). Swing both arms forward to shoulder level (fig. 21b). Swing both arms down to starting position and place left arm behind back. Swing right arm in a circle, forward, up, back, and down 6 times. Swing both arms forward and down. Swing both arms in a circle, forward, up, back, and down 6 times (fig. 21c).

*Transition.* Swing both arms forward to shoulder level. Swing arms down to starting position.

*Count.* Circle 2-3-4-5-6-forward down; right 2-3-4-5-6-forward down; both 2-3-4-5-6-forward down.



*Figure 22. Double arm swinging forward and flinging sideward.*

(2) *Double arm swinging forward and flinging sideward* (fig. 22). Swing both arms forward to shoulder level (fig. 22a). Fling both arms to the side and back as far as possible, keeping arms at shoulder level (fig. 22b). Swing both arms forward and then down to the sides. Perform these 4 movements consecutively 8 times.

*Transition.* Stride standing, arms at sides.

*Count.* Forward fling, forward down; 2 fling, forward down; to 8 fling, forward down.



*Figure 23. Head turning.*

(3) *Head turning* (fig. 23). Turn the head as far as possible to the left. Turn the head as far as possible to the right. Hold head erect during the turn. Repeat consecutively 8 times.

*Transition.* Head returned to normal position.

*Count.* Left right 2 and 3 and to 8 front.



*Figure 24. Shoulder backward and forward.*

(4) *Shoulder backward and forward* (fig. 24). Pull shoulders back as far as possible (fig. 24a). Pull shoulders forward (fig. 24b). Hold arms at sides during exercise. Repeat consecutively 8 times.

*Transition.* Bend trunk forward from the hips, arms hanging toward the ground (fig. 24c).

*Count.* Backward, forward, 2 and 3 and to 8, bend.



*Figure 25. Trunk twisting and arm flinging.*

(5) *Trunk twisting and arm flinging* (fig. 25). Fling arm up to left and at the same time twist upper body to left, keeping the body in a bent-over position. Fling arms up to the right. Keep trunk bent forward, head following direction of fling. Repeat consecutively 8 times.

*Transition.* Return to erect position, making a quarter turn left.

*Count.* Left, right, 2 and 3 and to 8, turn.

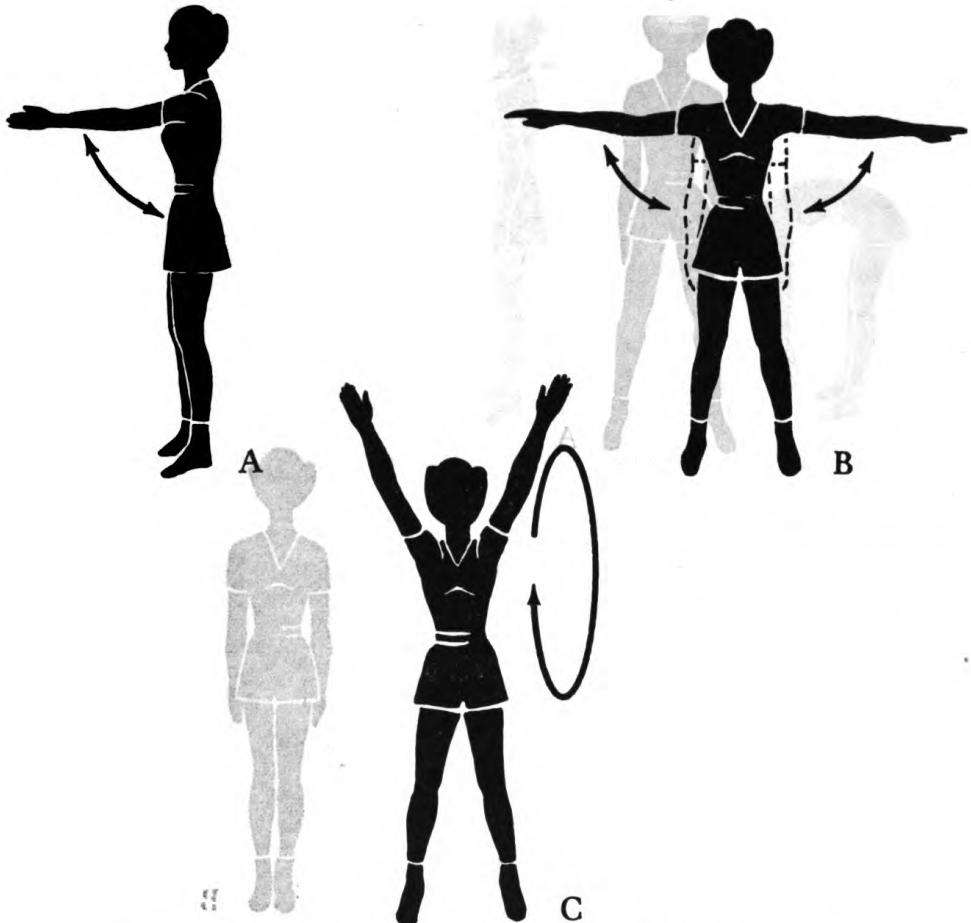


*Figure 26. Stride jumping.*

(6) *Stride jumping* (fig. 26). Jump to a stride position (fig. 26a). Jump, bringing feet together (fig. 26b). Jump to a stride position. On next jump make a quarter turn to the left, landing with feet together. Repeat consecutively 4 times. On the fourth jump, make a quarter turn to the left. Repeat this until facing the front.

*Transition.* This series ends with body in erect position and facing original direction.

*Count.* Apart, together; apart, turn; apart, together; apart, turn; apart, together; apart, turn; apart, together; and stop.



*Figure 27. Arms swinging forward, sideward, and circling.*

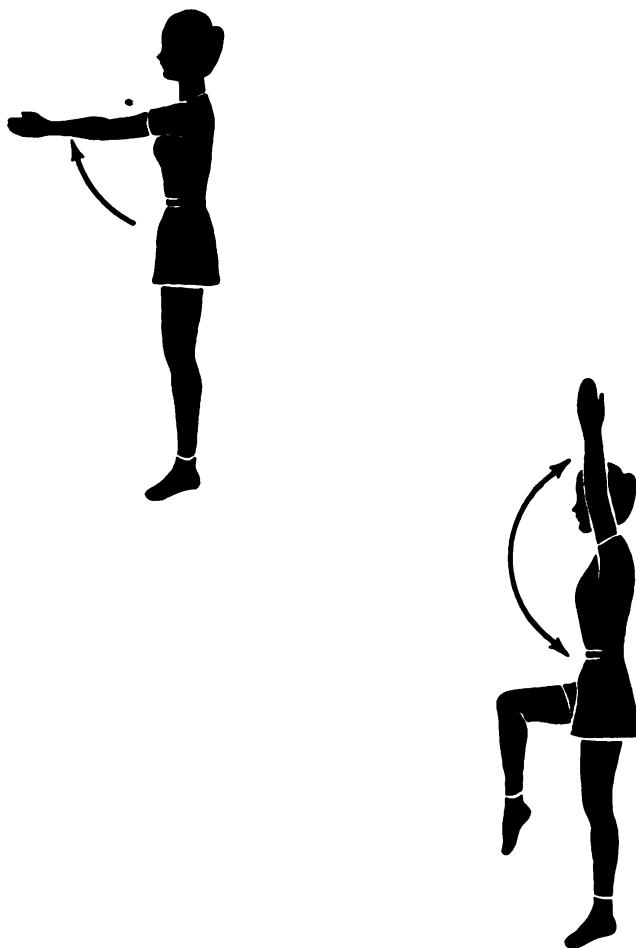
### 35. Cadence Series III

- Starting Position.* Stride stand.
- Movement.*

(1) *Arms swinging forward, sideward, and circling* (fig. 27). Swing arms forward to shoulder level (fig. 27a). Swing both arms down to starting position. Swing both arms to side shoulder level (fig. 27b). Swing both arms down to starting position. Swing both arms in a circle twice, with arms as close to the body as possible, forward, up, back, and down (fig. 27c). The first 4 swings are done in a continuous movement. The hands brush the skirt as they pass through the starting position. Perform all these movements consecutively 8 times.

*Transition.* At the end of the eighth count, bring the feet together, arms at sides.

*Count.* Forward and side and circle and circle; 2 and side and circle and circle; up to 8 and side and circle and circle; and . . .



*Figure 28. Double arm swinging forward and flinging with the leg lift.*

(2) *Double arm swinging forward and flinging with the leg lift* (fig. 28). Swing both arms forward to shoulder level (fig. 28a). Swing arms down to starting position. Fling arms forward and up over head strenuously; at the same time, lift left or right knee as high as possible, toe pointing downward (fig. 28b). Swing arms down to starting position and at the same time lower leg to starting position. Make these 4 movements consecutively 8 times. Lift knees alternately.

*Transition.* Stride standing.

*Count.* Forward and left; and 2 and right; and up to 8 and right; apart.

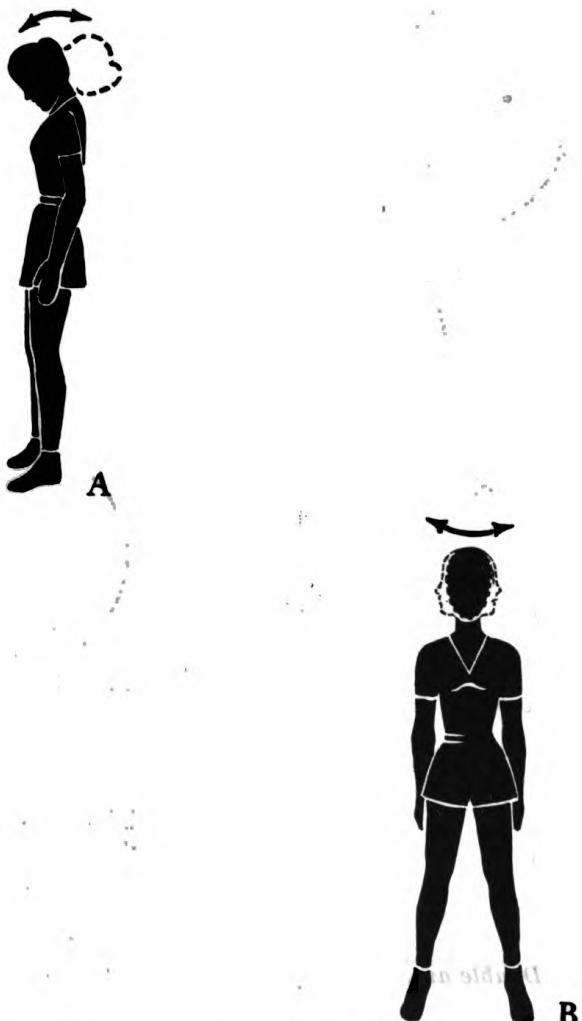
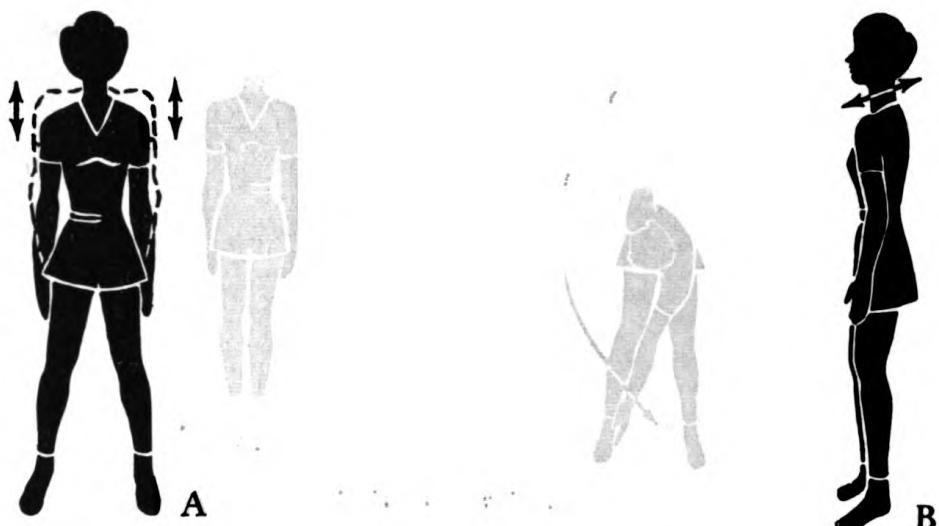


Figure 29. Head nodding and turning.

(3) *Head nodding and turning* (fig. 29). Drop the head forward to the chest (fig. 29a). Lift head to normal position. Drop the head backward. Return to normal position. Turn the head as far as possible to the left. Turn the head as far as possible to the right (fig. 29b). Repeat the entire exercise consecutively 4 times.

*Transition.* Head returned to normal position.

*Count.* Forward and back and left and right; and 2 and back and left and right; and 3 and back and left and right; and 4 and back and left and front.

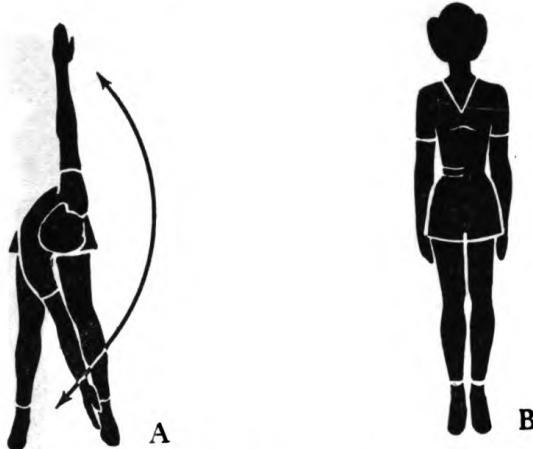


*Figure 30. Shoulder lifting and hunching.*

(4) *Shoulder lifting and hunching* (fig. 30). Lift both shoulders (fig. 30a). Relax. Repeat 4 times. Pull shoulders back as far as possible. Pull shoulders forward (fig. 30b). Repeat 4 times. Repeat entire exercise. Hold arms at sides during exercise.

*Transition.* Extend arms sideward at shoulder level. Bend body forward to a right-angle position (fig. 30c).

*Count.* Up and 2 and 3 and 4; and back and forward; and 2 and forward; and 3 and forward; and 4 and forward. *Repeat.*



*Figure 31. Bent-over airplane.*

(5) *Bent-over airplane* (fig. 31). Touch inside of left foot with the right hand (fig. 31a). Touch inside of right foot with left hand. Perform these 2 movements rapidly 8 times. The upper body is twisted to perform the movement. The free hand is pointed toward the ceiling. The head is turned to look at the free hand.

*Transition.* Jump to erect position, feet together (fig. 31b).

*Count.* Left and right; and 2 and right; and 3 and right; and up to 8 and jump.



*Figure 32. Jumping jack.*

(6) *Jumping jack* (fig. 32). Jump to a stride position and touch hands over head. Jump to erect position, arms at sides. Repeat movement 8 times consecutively.

*Transition.* The series ends in erect position, feet together.

*Count.* Apart, together; 2, together; and up to 7, together; and stop.



*Figure 33. Alternate arm swinging forward and sideward.*

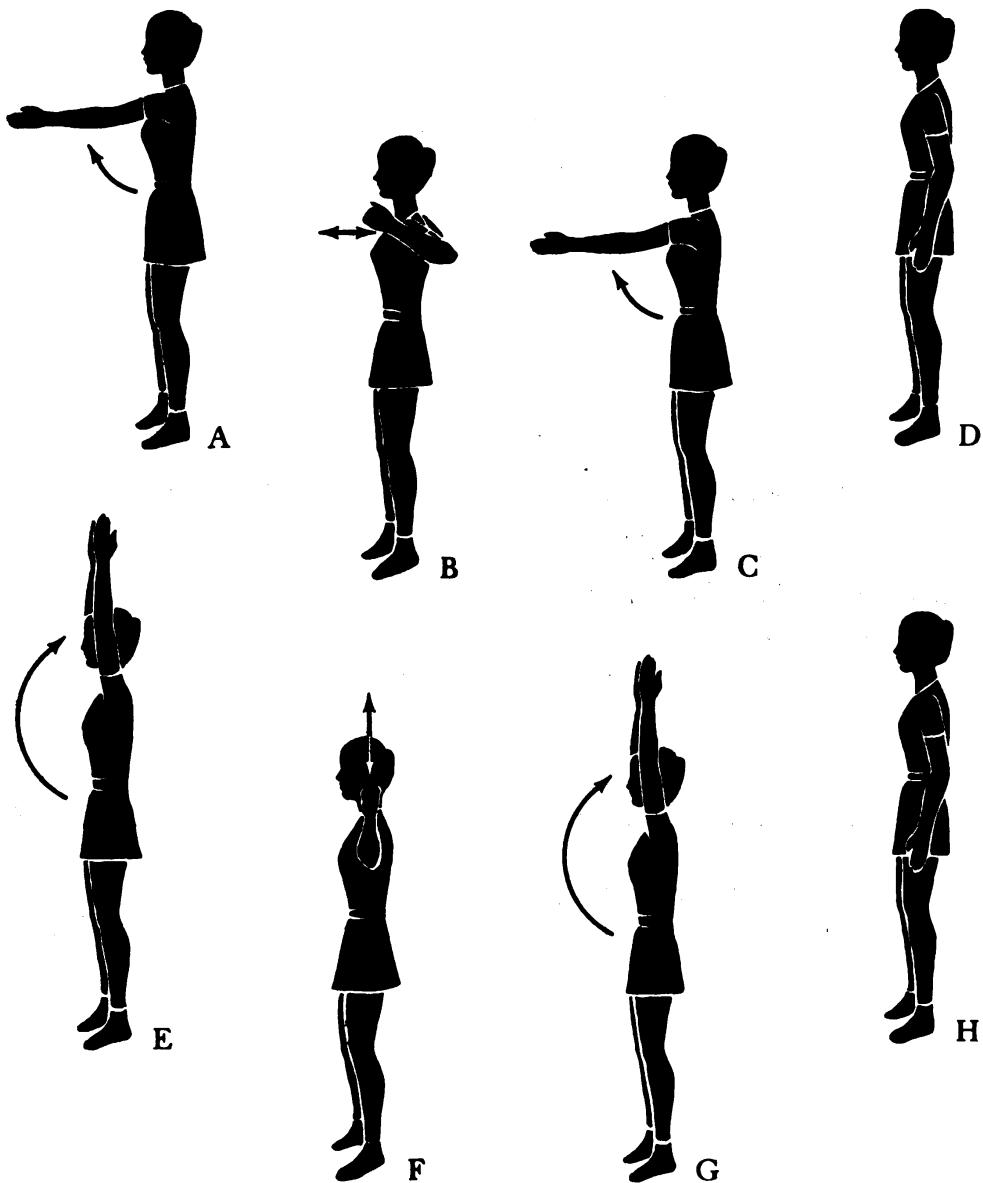
### **36. Cadence Series IV**

- a. Starting Position.* Stride stand.
- b. Movement.*

(1) *Alternate arm swinging forward and sideward* (fig. 33). Swing right arm forward shoulder level; at the same time swing left arm sideward shoulder level. Swing arms down to starting position. Repeat, alternating movement. Swing arms down to starting position. Repeat consecutively 8 times.

*Transition.* Swing both arms down to sides.

*Count.* Swing and 2; and swing and 3; and up to 8 down.

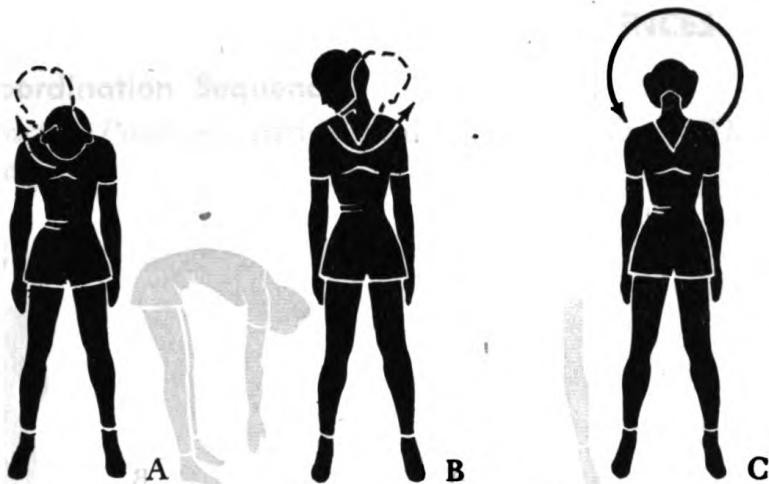


*Figure 34. Arms swinging and thrusting.*

(2) *Arm swinging and thrusting* (fig. 34). Swing arms forward shoulder level (fig. 34a). Bend arms and pull elbows back, keeping them shoulder height (fig. 34b). Thrust arms forward shoulder height (fig. 34c). Swing arms down to starting position (fig. 34d). Swing arms up over head (fig. 34e). Bend arms and pull elbows down and back (fig. 34f). Thrust arms over head (fig. 34g). Swing arms down (fig. 34h). Repeat 8 times consecutively.

*Transition. Arms at sides.*

*Count.* Forward pull, thrust down; up pull, thrust down; 2 pull, thrust down; up pull, thrust down; 3 pull, thrust down; and up to 8 pull, thrust down.

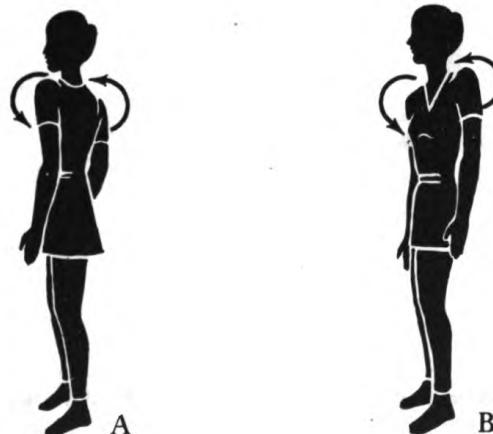


*Figure 35. Head swinging and circling.*

(3) *Head swinging and circling* (fig. 35). Drop head to chest and swing head to right until in line with right shoulder (fig. 35a). Swing head in half circles until in line with left shoulder (fig. 35b). Swing head in complete circle to the right (fig. 35c). Repeat, starting left for second count. Repeat exercise 4 times. Perform rhythmically.

*Transition.* Head to front.

*Count.* Right and left and circle around; left and right and circle around; right and left and circle around; left and right and circle around.



*Figure 36. Alternate shoulder circling.*

(4) *Alternate shoulder circling* (fig. 36). Circle left shoulder forward, up, back, and down (fig. 36a). As left shoulder starts back, circle right shoulder forward, up, back, and down (fig. 36b). Perform 8 times.

*Transition.* Extend both arms over head.

*Count.* Left, right, 2 and 3 and to 8 up.



*Figure 37. Alternate trunk stretching and bouncing.*

(5) *Alternate trunk stretching and bouncing* (fig. 37). Stretch right arm up (fig. 37a). Relax to starting position. Stretch left arm up. Relax to starting position. Bend trunk down (fig. 37b). Without rising to upright position, pull head and trunk farther down in bobbing motion 4 times.

*Transition.* Return to starting position.

*Count.* Right and left and relax 2-3-4; left and right and relax 2-3-4; 2 and right and relax 2-3-4; right and left and relax 2-3-4; up to 4 and right and relax 2-3-4; right and left and relax 2-3 jump.



*Figure 38. Running.*

(6) *Running* (fig. 38). Run in place, arms bent, legs lifted hip height in front, toes pointed. Maintain an even speed.

*Transition.* Series ends in erect standing position.

*Count.* Left 2-3-4-5-6-7-8, 2-2-3-4-5-6-7-8, 3-2-3-4-5-6-7-8, 4-2-3-4-5-6-7-8.

## Section IV. COORDINATION SEQUENCES

### 37. Coordination Sequence I

- a. Starting Position. Stride stand with arms at forward bend.
- b. Exercises.

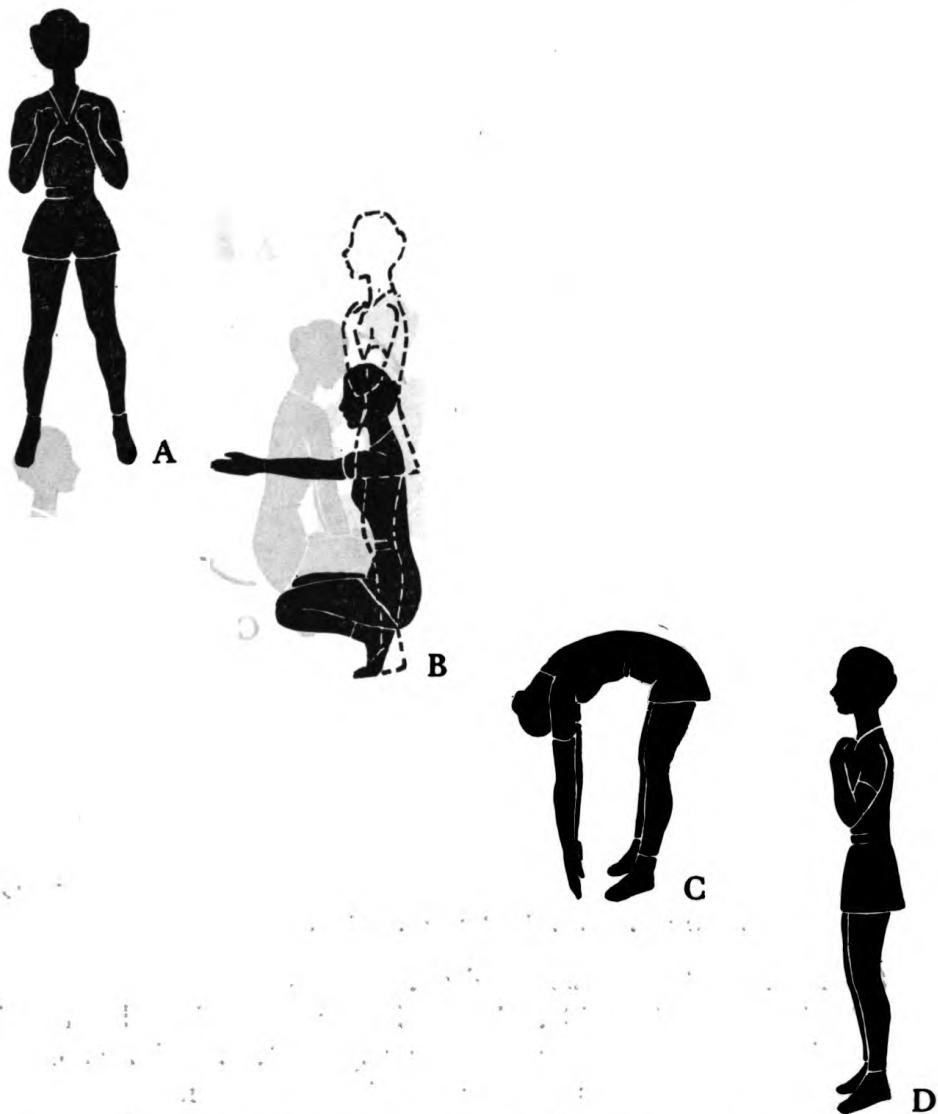


Figure 39. Exercise 1, coordination sequence I.

- (1) *Exercise 1* (fig. 39). From starting position (fig. 39a), lower to deep knee-bend position, extending arms forward forcefully at shoulder level (fig. 39b). Return to starting position. Repeat. Bend forward from waist, keeping knees straight and touching fingers to the floor (fig. 39c). Return to starting position (fig. 39d). Repeat.

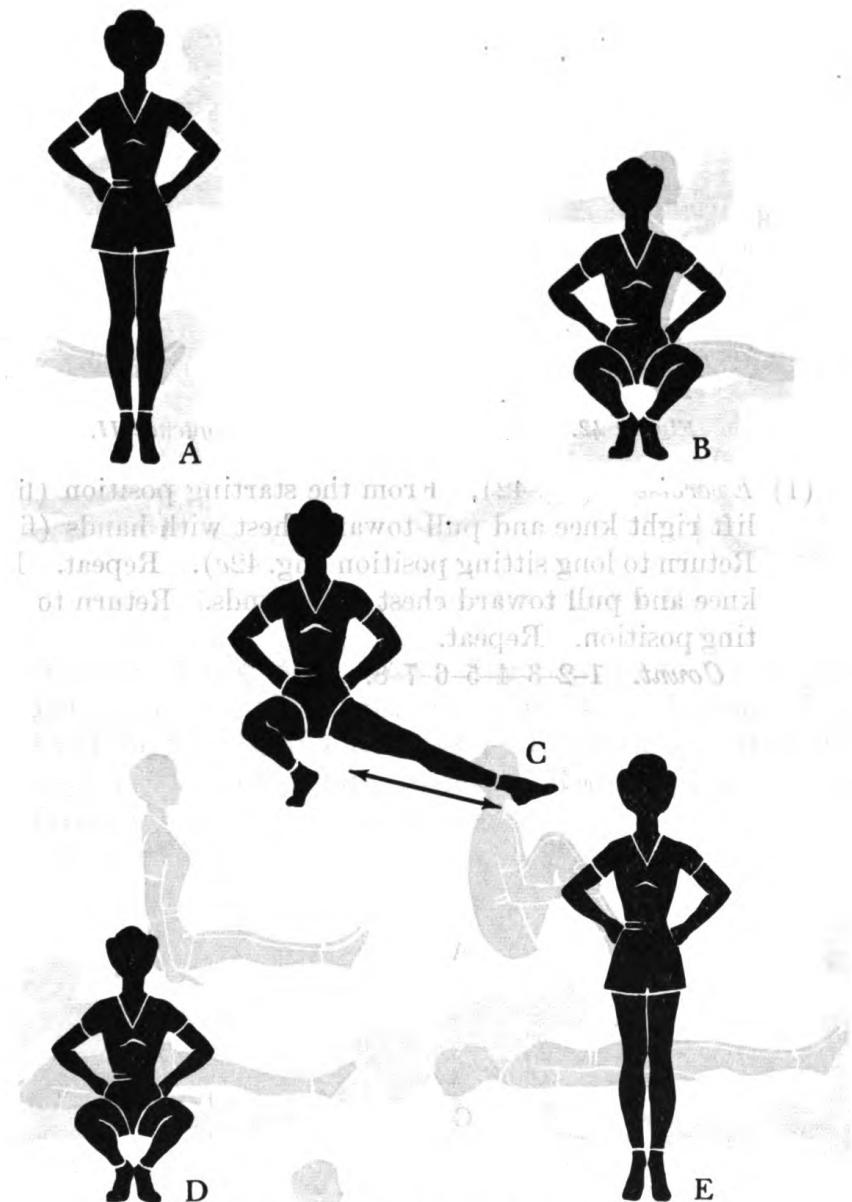
*Count.* 1-2-3-4-5-6-7-8.



*Figure 40. Exercise 3, coordination sequence I.*

- (2) *Exercise 2.* Repeat exercise 1.
- (3) *Exercise 3* (fig. 40). Lower body to deep knee-bend position, placing fingertips on floor (fig. 40a). Straighten knees, keeping fingertips on floor (fig. 40b). Return to deep knee-bend position, keeping fingertips on floor (fig. 40c). Return to starting position (fig. 40d). Repeat both parts of exercise.

*Count. 1-2-3-4-5-6-7-8.*



*Figure 41. Exercise 4, coordination sequence I.*

(4) *Exercise 4* (fig. 41). Rise on toes, hands on hips (fig. 41a). Lower to deep knee-bend position, back straight (fig. 41b). Extend left leg sideward, leg straight (fig. 41c). Return to deep knee-bend position (fig. 41d). Return to standing position, rising on toes (fig. 41e). Lower heels and drop arms to sides.

*Count.* 1-2-3-4-5-6-7-8.

### 38. Coordination Sequence II

- Starting Position.* Long sitting.
- Exercises.*

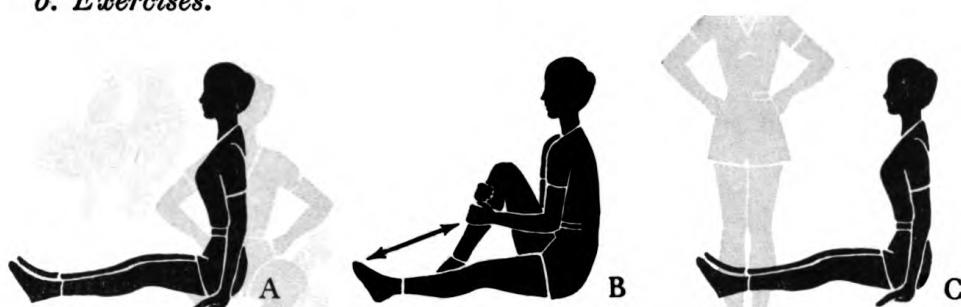


Figure 42. Exercise 1, coordination sequence II.

- (1) *Exercise 1* (fig. 42). From the starting position (fig. 42a), lift right knee and pull toward chest with hands (fig. 42b). Return to long sitting position (fig. 42c). Repeat. Lift left knee and pull toward chest with hands. Return to long sitting position. Repeat.

*Count.* 1-2-3-4-5-6-7-8.

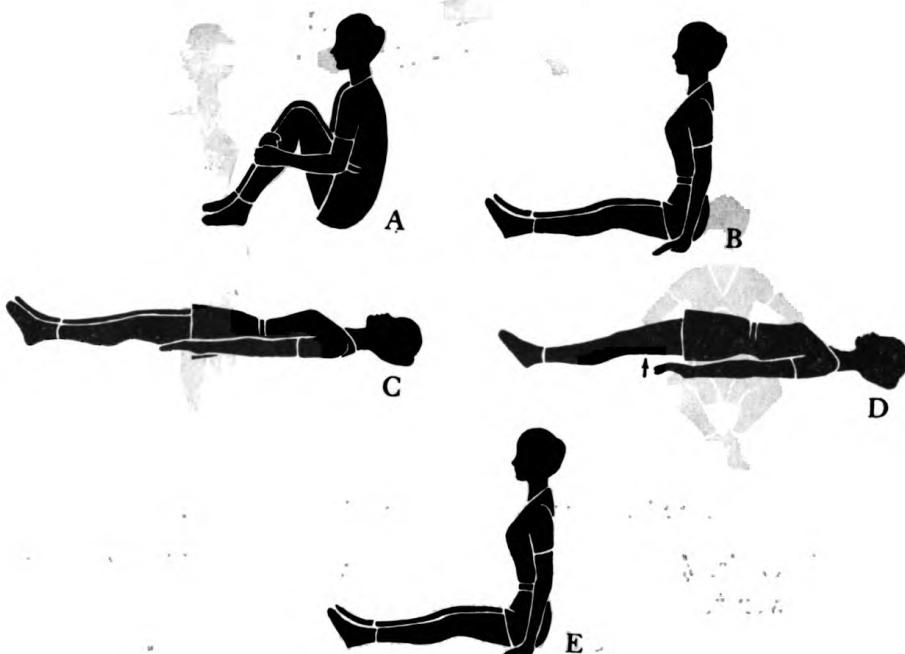
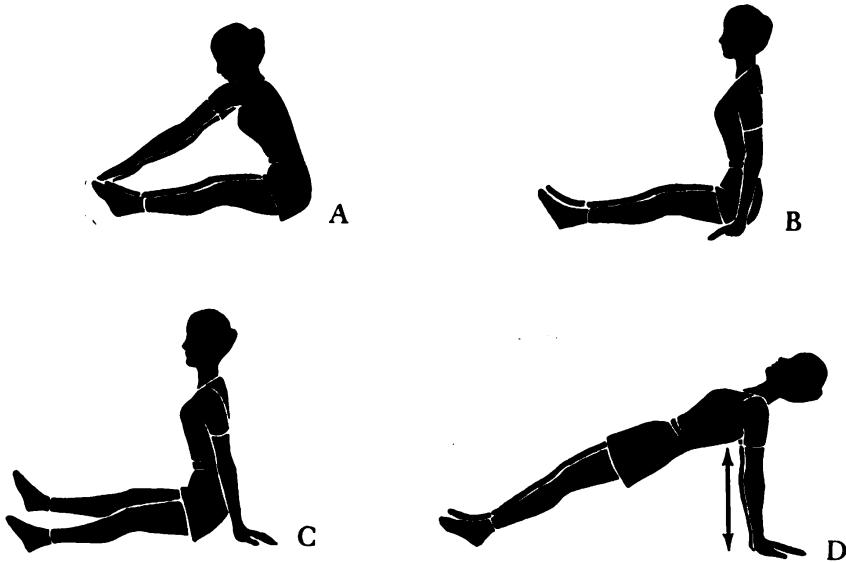


Figure 43. Exercise 2, coordination sequence II.

- (2) *Exercise 2* (fig. 43). Lift both legs and pull toward chest with hands (fig. 43a). Return to long sitting position (fig. 43b). Repeat. Lower to back lying position with arms at sides (fig. 43c). Raise hips from floor (fig. 43d). Lower hips to floor. Raise trunk to long sitting position (fig. 43e).

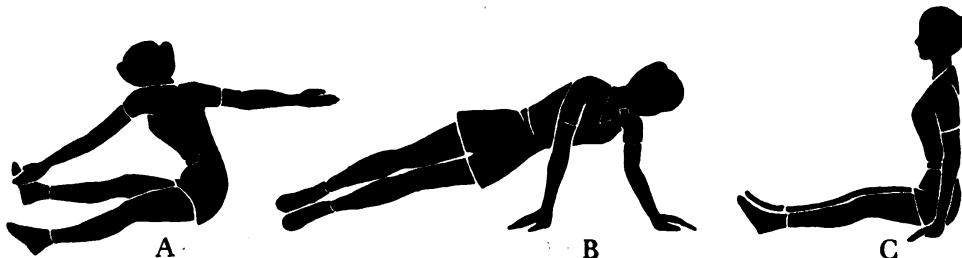
*Count.* 1-2-3-4-5-6-7-8.



*Figure 44. Exercise 3, coordination sequence II.*

(3) *Exercise 3* (fig. 44). Touch fingertips to toes (fig. 44a). Return to long sitting position (fig. 44b). Repeat. Place hands on floor behind hips (fig. 44c). Raise hips from floor (fig. 44d). Lower hips to floor. Raise hips from floor. Lower hips to floor and spread legs.

*Count.* 1-2-3-4-5-6-7-8.



*Figure 45. Exercise 4, coordination sequence II.*

(4) *Exercise 4* (fig. 45). Touch left hand to right foot (fig. 45a). Touch right hand to left foot. Roll over on left hip, placing both hands on floor at left side of body (fig. 45b). Keeping body straight, rise to an outstretched position with feet together. Lower body to a sitting position, feet apart (fig. 45c). Touch right hand to left foot. Touch left hand to right foot. Roll over on right hip, placing both hands on floor at right side of body. Keeping body straight, rise to an outstretched position with feet together. Lower to sitting position, legs together.

*Count.* 1-2-3-4-5-6-7-8.

### 39. Coordination Sequence III

a. *Starting Position* (fig. 46). Back lying, with arms extended sideward at shoulder level, palms down.

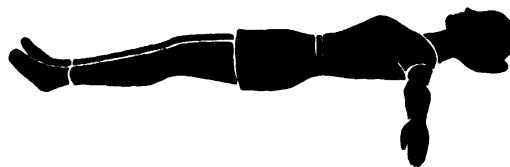


Figure 46. Starting position, coordination sequence III.

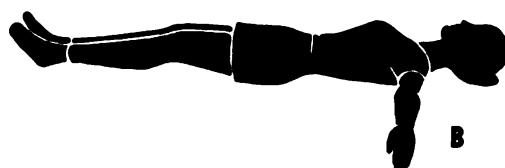
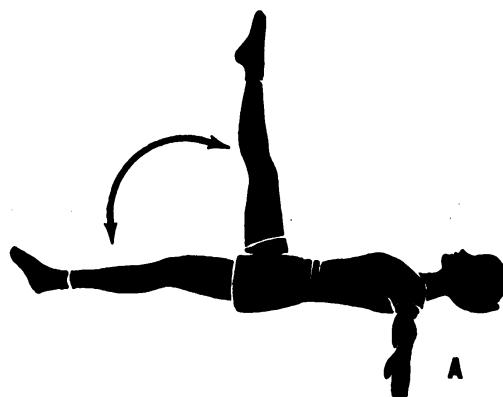
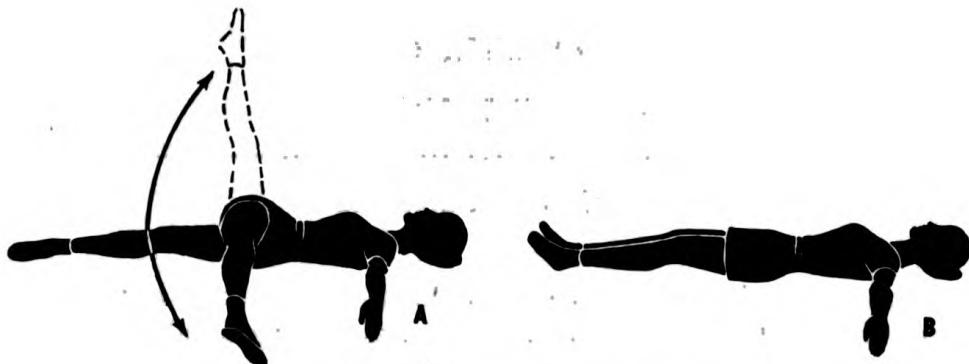


Figure 47. Exercise 1, coordination sequence III.

b. *Exercises.*

- (1) *Exercise 1* (fig. 47). Lift right leg upward from floor to form right angle with body, keeping knees straight and toes pointed (fig. 47a). Return to starting position. Lift left leg to form right angle with body. Return to starting position (fig. 47b). Repeat right and left.

*Count.* 1-2-3-4-5-6-7-8.

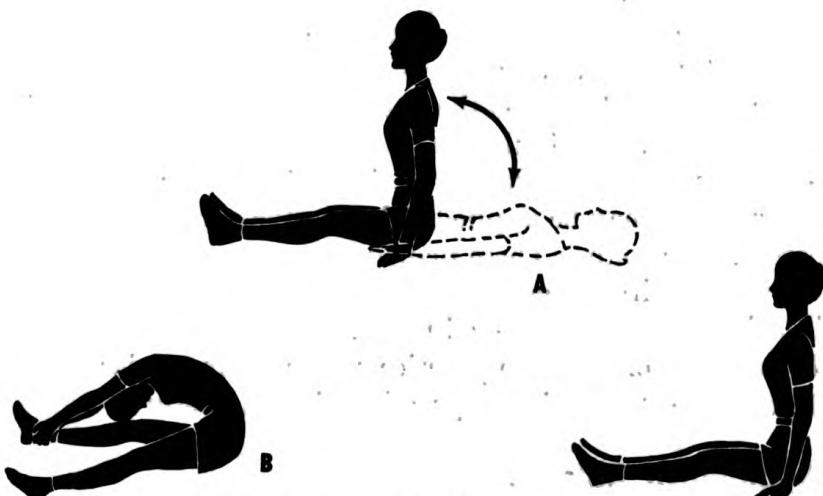


*Figure 48. Exercise 2, coordination sequence III.*

(2) *Exercise 2* (fig. 48). Lift right leg upward from floor to form right angle with body, keeping knee straight and toe pointed. Swing right leg across body and lower to floor so that right foot is in line with left hand (fig. 48a). Return right leg to right-angle position. Lower right leg to floor (fig. 48b). Repeat with left leg.

*Count.* 1-2-3-4-5-6-7-8.

(3) *Exercise 3.* Repeat exercise 2.



*Figure 49. Exercise 4, coordination sequence III.*

(4) *Exercise 4* (fig. 49). Lift trunk to sitting position, legs straight (fig. 49a). Return to back lying position. Return to sitting position. Spread feet apart. Grasp right ankle with both hands and pull head toward right knee (fig. 49b). Return to sitting position (fig. 49c). Grasp left ankle with both hands and pull head toward left knee. Return to sitting position.

*Count.* 1-2-3-4-5-6-7-8.

## CHAPTER 6

### POSTURE TRAINING

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#### Section I. GENERAL

##### **40. Importance**

Good posture is an asset to every woman. It improves her appearance, increases her efficiency, and contributes to her general well-being. In the military service good posture is a prerequisite for the proper wearing of the uniform. Positive steps should therefore be taken to insure that every woman in the unit learn how to maintain her posture at a suitable standard. The physical training program provides an opportunity for supervised work on posture development. But this is not enough. Good posture cannot be achieved by practicing one period a day. The habit of good posture is attained only through continual daily practice. The unit commander should incorporate posture training into all other phases of training.

##### **41. Principles**

Very few persons assume good posture without being taught. Many have a misconception about the meaning of good posture. They tilt their heads, thrust out their chests, draw back their shoulders, push back their knees, and tell you they are standing straight. Unless corrections are made, such faults may become a habit and lead to permanent structural defects. Posture training is based upon four general principles which may be applied either to the group as a whole or to members of the group. These principles are—

- a.* Create a desire for good posture.
- b.* Teach the elements of good posture.
- c.* Provide opportunity to practice good posture under supervision.
- d.* Encourage the continued practice of good posture.

##### **42. Anatomical Balance**

Because physical structure and patterns of growth and development vary widely, there is no one "best posture." There is, however, a sound standard of good posture based upon anatomical balance. Anatomical balance, the keynote of good posture, is achieved by good alinement of body parts. By good alinement of body parts is meant true vertical alinement in which the various body segments are in line, one directly above the other, so that they support one another along the line of the pull of gravity. If the body alinement is correct, an imaginary line drawn on the profile from the top of the head through the lobe of the ear, the tip of the shoulder, the

middle of the hips, slightly in back of the kneecap, and in front of the outer anklebone will be a straight line (fig. 50). In this position the knees, hips, shoulders, and head are properly balanced over the ankles. When this alignment is disturbed by the faulty position of one or more parts, the entire body is thrown out of line. The muscles must then work to hold up parts against the pull of gravity, producing strain and fatigue. To achieve proper posture through anatomical balance the following points should be checked. How do your women measure up?

a. The body should be stretched upward as tall as possible. The head should not be tilted or the shoulders raised. Flattening the curve of the neck and keeping the eyes level will avoid these faults.

b. Head and neck are centered between the shoulders. The chin should be drawn inward so that its point is in a direct line over the notch at the top of the breastbone, and the neck pressed back against the collar.

c. Shoulders are relaxed and fall evenly. If the shoulders have a tendency to droop, they may be drawn slightly back, but this position should never be strained.

d. The chest is moderately elevated. If the chest is raised properly, the stomach wall will be flattened. The stomach should not be drawn in so far that normal breathing is restricted.

e. Buttocks are drawn down and under to flatten the lower back and prevent the forward tilting of the pelvis. The plane of the waistline is parallel to the ground.

f. Knees are straight but not stiff.

g. Weight is evenly distributed between the heels and balls of both feet.

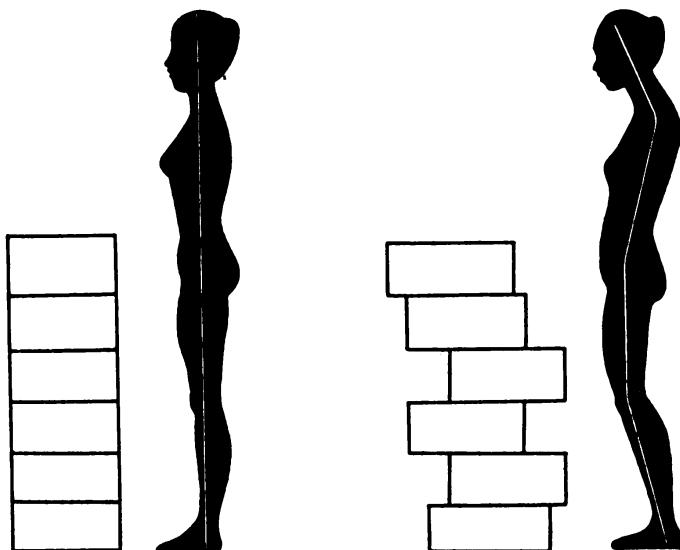


Figure 50. Anatomical balance.

### **43. Teaching Good Posture**

*a.* The first essential in teaching good posture is to know what good posture is. Be prepared to give complete explanations and demonstrations of good posture. Acquire the ability to recognize defects and make corrections on the spot.

*b.* See that the women whom you are instructing have a clear mental image of what good posture is. In this way they can recognize any faults that they may have. Develop their ability to discover their faults by careful instruction and concentrated practices at repeated intervals.

*c.* Give unit instruction, with individual corrections when necessary. When posture training is carried out in large groups, use command techniques accompanied by cues and admonitions. Some of the suitable commands and admonitions are—

- (1) Stand tall, sit tall, walk tall.
- (2) Chin in, chest up, top of head stretched toward ceiling.
- (3) Shoulders down and relaxed.
- (4) Knees straight.
- (5) Hips tucked in.
- (6) Arms down and straight.
- (7) Toes straight ahead.
- (8) Easy balance.

*d.* Always give the groups a clear picture of what you expect from your instruction. Explain and demonstrate each command. Sometimes a demonstration of common faults in posture adds humor to a class, but be sure to give the correct position after each demonstration of a fault. When you are asking for class participation, either you or an assistant should demonstrate and explain the command while the class is attempting to execute it. Assistants may also make individual corrections.

### **44. Motivation**

Regardless of amount of instruction and supervised practice, good posture becomes a habit only if the individual really wants to stand or sit correctly. Motivation is an important part of posture training. How can you make your women want to have good posture? Whatever means you may select, your approach should always be centered upon individual and unit pride. Cultivate a sense of pride in appearance, individually and collectively. Remember that posture and morale go hand in hand, one being an indication of the other. Early in their training, give the women a well-planned talk on good posture. Tell them the reasons for cultivating good posture. Illustrate your talk with demonstrations of important points.

*a. Reasons for Cultivating Good Posture.*

- (1) Every woman is judged by her appearance. The woman with good posture commands attention. She inspires confidence. She looks like a member of the Women's Army Corps. In the eyes of her commanding officer, she is the person for the job.
- (2) Psychologically, good posture is associated with good morale. A woman with good posture feels better and is more self-assured. A woman with a sense of pride in herself and her unit "stands tall."
- (3) Physically, good posture permits the body to function more effectively. Opposing muscle groups balance each other and maintain the bony structure in balance. Balanced bony structure insures the correct position of the internal organs. Correct position of internal organs assists the organs in performing the body functions.
- (4) At work or play, good posture relieves the strain and tension placed upon bones, muscles, and ligaments. It reduces fatigue and promotes efficiency.

*b. Effects of Poor Posture.*

- (1) The woman with poor posture does not reflect credit on herself, her unit, or the Women's Army Corps. She does not inspire confidence in herself and is often overlooked in favor of the woman with good appearance.
- (2) A woman with poor posture may and often does develop a negative, discouraged attitude.
- (3) Faulty posture may result in a forward head, rounded shoulders, flat chest, swayback, protruding abdomen, tilted pelvis. These faults may lead to permanent malformations of the body. As muscles become weak, they permit a sag; the sag results in further weakening of the muscles; finally the muscles can no longer prevent or correct the sag.
- (4) A woman with poor posture often finds herself unduly fatigued after work and cannot perform the job efficiently or enjoy her recreational activities.

*c. Use of Visual Aids.* Use visual aids, both in your talk and around the unit area. Pictures of good posture and signs strategically placed will remind the women to practice good posture.

*d. Personal Practice.* Be an example of good posture. Show the women that you are enthusiastic about it. Sell them on the idea. Compliment women with excellent posture. When you see some with faults, remind them of the elements of good posture. Always remember that posture correction is a gradual process and repeated admonition and correction will be necessary to overcome habits of faulty posture.

## Section II. POSTURAL EXERCISES

### 45. General

The exercises below are designed for persons whose posture requires special attention. Each exercise is gaged to a particular weakness. All exercises should be done in slow cadence. An exercise for the relief of dysmenorrhea (menstrual difficulty) has been included, since dysmenorrhea is sometimes caused and usually aggravated by postural weakness.

Posture defect	Recommended exercises
Round shoulders.....	Nos. 1, 2, 3, 5, 6, 7, 8, 9
Swayback.....	Nos. 4, 5, 7
Sagging abdomen.....	Nos. 4, 11, 12
Forward head.....	Nos. 1, 3, 6
Pelvic tilt.....	Nos. 4, 5, 11, 12
Dysmenorrhea.....	No. 13

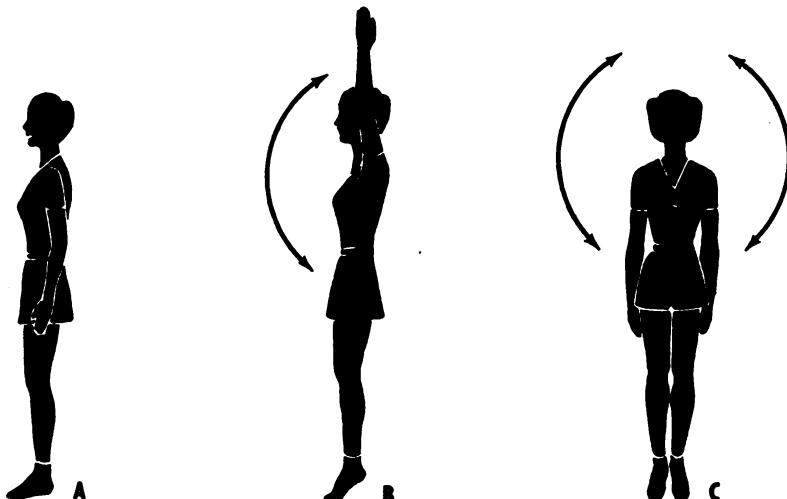


Figure 51. Exercise 1, postural exercises.

### 46. Exercise 1

(fig. 51)

a. *Starting Position.* Erect stand (fig. 51a).

b. *Movement.*

- (1) Swing arms forward and upward to full stretch over head and at same time rise high on toes (fig. 51b).
- (2) Swing arms sideward and downward slowly and press back hard. At the same time, retract chin and let heels drop to the ground (fig. 51c). Avoid an exaggerated arch in lower back.



*Figure 52. Exercise 2, postural exercises.*

#### **47. Exercise 2**

(fig. 52)

*a. Starting Position.* Trunk leaning forward about  $60^{\circ}$ , arms hanging downward loosely from shoulders (fig. 52a).

*b. Movement.*

- (1) Swing arms sideward and backward vigorously, retracting chin forcefully and flattening upper back (fig. 52b). Hold this position momentarily.
- (2) Resume starting position (fig. 52c).



*Figure 53. Exercise 3, postural exercises.*

#### **48. Exercise 3**

(fig. 53)

*a. Starting Position.* Standing, fingertips touching shoulders, arms in front of chest, and elbows downward (fig. 53a).

*b. Movement.*

- (1) Move upper arms outward and backward with elbows hugging sides (fig. 53b). Hold this position a full second while trying to force arms farther around and back. At the same time, retract head and attempt to stretch upward.
- (2) Resume starting position (fig. 53c).



*Figure 54. Exercise 4, postural exercises.*

#### **49. Exercise 4**

(fig. 54)

a. *Starting Position.* Kneeling on the mat, trunk bent sharply forward, hands behind head (fig. 54a).

b. *Movement.*

- (1) Still leaning forward, straighten upper back and press elbows and head backward. At the same time, pull in chin (fig. 54b).
- (2) Resume starting position (fig. 54c).



*Figure 55. Exercise 5, postural exercises.*

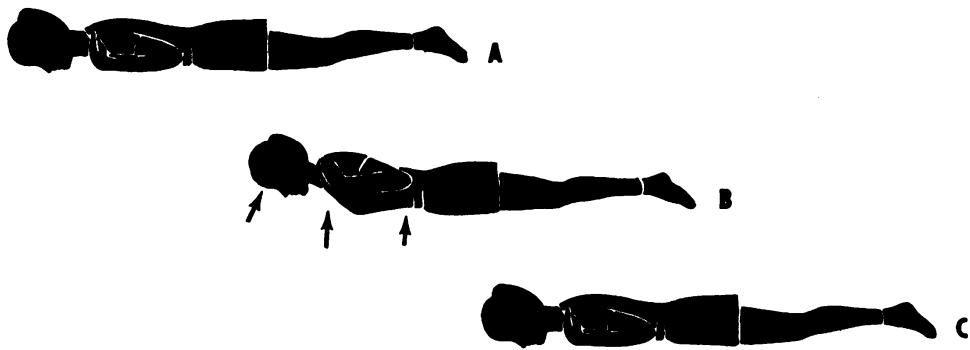
#### **50. Exercise 5**

(fig. 55)

a. *Starting Position.* Sitting on the floor, knees raised, trunk bent forward, and arms stretched forward (fig. 55a).

b. *Movement.*

- (1) Still leaning forward, swing arms upward and backward. At the same time, pull in chin (fig. 55b).
- (2) Resume starting position (fig. 55c).



*Figure 56. Exercise 6, postural exercises.*

## 51. Exercise 6

(fig. 56)

a. *Starting Position.* Lying face down on the floor, with elbows at sides and fingertips on shoulders (fig. 56a).

b. *Movement.*

- (1) Rotate arms outward and pull elbows in hard at sides. At the same time, pull in chin and lift head about 6 inches from the floor (fig. 56b). Hold this position a full second.
- (2) Resume starting position (fig. 56c).



*Figure 57. Exercise 7, postural exercises.*

## 52. Exercise 7

(fig. 57)

a. *Starting Position.* Bending forward about  $45^{\circ}$ , elbows horizontally sideward from shoulders, forearms bent forward, palms down, thumbs just in front of shoulders (fig. 57a).

b. *Movement.*

- (1) Straighten elbows and swing arms slowly but hard sideward and backward. At the same time, retract head (fig. 57b).
- (2) Resume starting position (fig. 57c).



*Figure 58. Exercise 8, postural exercises.*

### 53. Exercise 8

(fig. 58)

a. *Starting Position.* Leaning slightly forward, elbows bent, and fingertips touching shoulders (fig. 58a).

b. *Movement.*

- (1) Make small circles about a foot in diameter, elbows circling upward and backward. Press arms backward and retract head (fig. 58b). Keep movement slow.
- (2) After completing sufficient repetitions, resume starting position (fig. 58c).



*Figure 59. Exercise 9, postural exercises.*

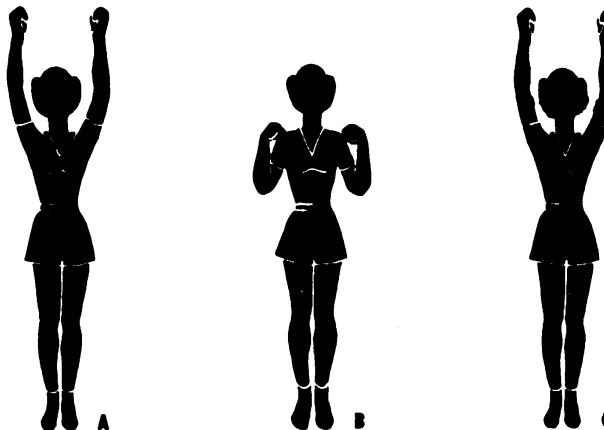
### 54. Exercise 9

(fig. 59)

a. *Starting Position.* Leaning slightly forward, arms horizontally at sides, palms up (fig. 59a).

*b. Movement.*

- (1) Make small circles about a foot in diameter, hands circling upward and backward. Press arms backward and retract head (fig. 59b). Keep movement slow.
- (2) After completing sufficient repetitions, resume starting position (fig. 59c).



*Figure 60. Exercise 10, postural exercises.*

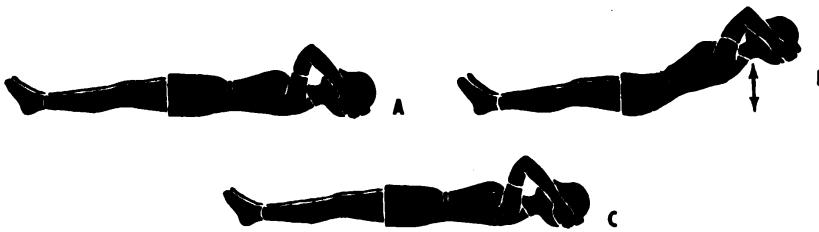
**55. Exercise 10**

(fig. 60)

- a. *Starting Position.* Arms over head (fig. 60a).

*b. Movement.*

- (1) Pull arms slowly downward until fists are beside shoulders (fig. 60b). Pull as though chinning.
- (2) Resume starting position (fig. 60c).



*Figure 61. Exercise 11, postural exercises.*

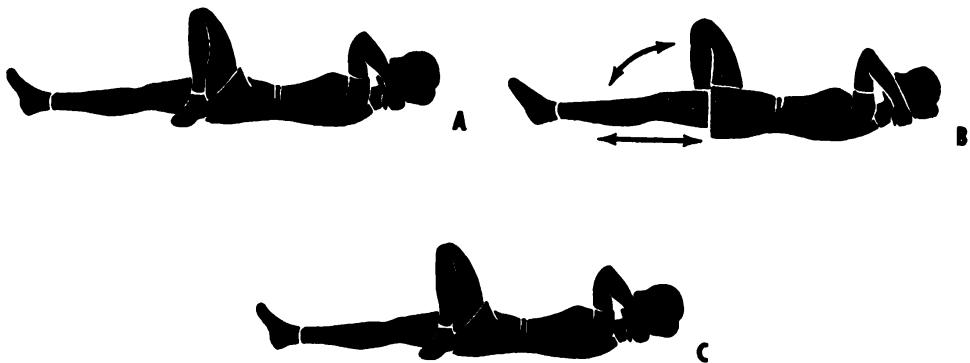
**56. Exercise 11**

(fig. 61)

- a. *Starting Position.* On back, fingers laced behind head (fig. 61a).

*b. Movement.*

- (1) Curl slowly toward sitting position until the shoulders are approximately 8 inches from the floor. The elbows are lifted first, followed by the head and finally the shoulders (fig. 61b).
- (2) Resume starting position (fig. 61c).



*Figure 62. Exercise 12, postural exercises.*

### 57. Exercise 12

(fig. 62)

a. *Starting Position.* On back, fingers laced behind neck, lower back flat against floor, left knee flexed, with heel close to buttocks (fig. 62a).

b. *Movement.*

- (1) Slide right leg toward buttocks until the knee reaches full flexion. Return left leg to extended position as the right leg is brought up (fig. 62b).
- (2) Resume starting position (fig. 62c).



*Figure 63. Exercise 13, postural exercises.*

### 58. Exercise 13

(fig. 63)

a. *Starting Position.* Back lying, knees bent, feet flat on the floor, left hand on lower abdomen, right arm at side.

b. *Movement.* Slowly extend the abdominal muscles as far as possible. Pull in on the abdominal wall until abdomen is retracted as much as possible. Keep movement slow and continuous. Perform 10 times on individual timing.

## CHAPTER 7

### BODY MECHANICS

#### 59. Purpose of Instruction

Correct body mechanics is the art of distributing the strain of a job over several sets of muscles instead of putting the load on a few. It is the art of using the stronger muscles in the body instead of straining the weaker. As a result, the job is done more efficiently, less energy is consumed, and injury is avoided. The principles underlying proper body mechanics are based on common sense. When the body is used correctly, it does its work efficiently and gracefully.

#### 60. Classes in Body Mechanics

Classes in body mechanics should be practical. Principles should be applied to everyday tasks. Use objects familiar to Army personnel, such as footlockers and duffel bags, to practice specific skills. The class should be organized on a formal basis, but considerable individual assistance and supervision should be included.

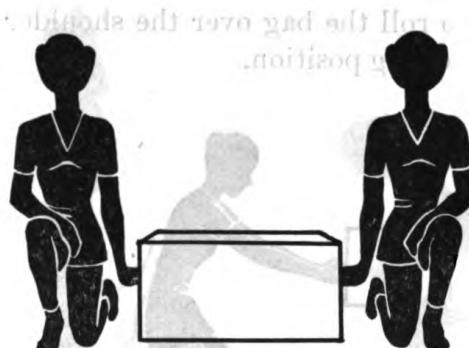


Figure 64. Lifting.

#### 61. Effective Use of Body

*a. Lifting* (fig. 64). Lift with the leg rather than with the back muscles. To lift a very heavy object, bend the knees, getting the body as close to the object as possible. Sometimes it is desirable to kneel on the knee closest to the object to be lifted. Whenever lifting large, heavy objects, such as footlockers, two women should work together. They should lift at a signal to assure that they are moving together.



*Figure 65. Carrying.*

b. *Carrying* (fig. 65). Carry the object in such a manner that the weight is centered over the body. If possible, this should be on the shoulders with the back nearly straight. With objects such as duffel bags it is possible to roll the bag over the shoulder and center it on the back from the kneeling position.



*Figure 66. Pulling.*

c. *Pulling* (fig. 66). To pull, brace the feet firmly, bend the knees, round the back, grasp the object firmly, and let the body weight do most of the pulling.



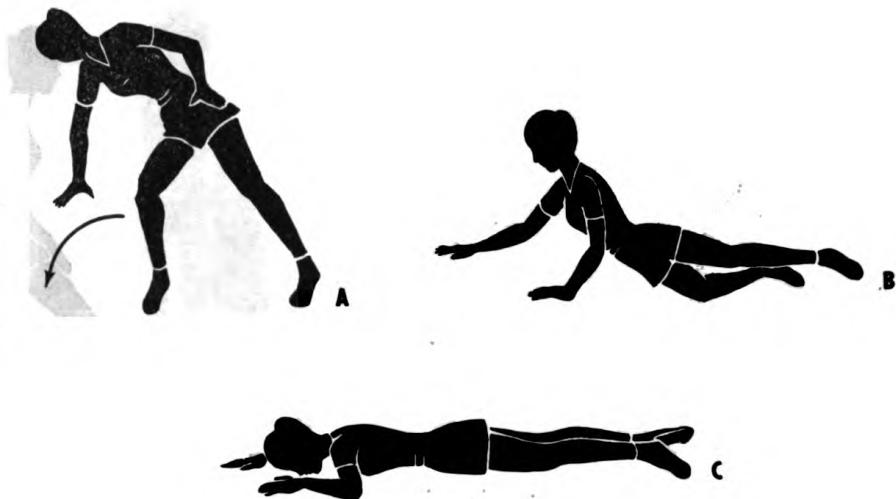
*Figure 67. Pushing.*

*d. Pushing* (fig. 67). The whole body weight is used in pushing any heavy object. To push with the arms, face the object, lean the body from the ankles, brace the feet, and push against the floor or ground (fig. 67a). To push with the abdomen, face the body sideways, place the shoulder against the object, brace the feet, and push against the floor or ground (fig. 67b). To push with the back, place the back against the object, brace the feet, and push with the upper back (fig. 67c).



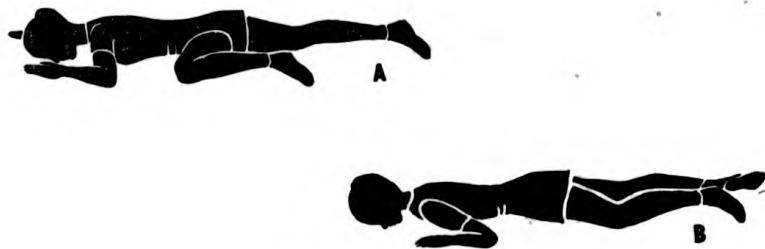
*Figure 68. Jumping.*

*e. Jumping* (fig. 68). When jumping from a height, land on the toes, bending the knees to absorb the shock (fig. 68a). Bend the knees in proportion to the height from which the jump is made (fig. 68b).



*Figure 69. Falling.*

*f. Falling* (fig. 69). With the right foot placed forward and toes turned inward, fall forward (fig. 69a), landing on the outside of the right knee and thigh to break the fall (fig. 69b). As the body falls toward the floor or ground, break the rest of the fall with the hands (fig. 69c). Keep the body relaxed. Distribute the impact of the fall evenly along the entire body.



*Figure 70. Crawling.*

*g. Crawling* (fig. 70). To prepare to crawl from the prone position, bend the left knee and pull it toward the body, with the inside border of the left foot against the floor or ground. Place the hands opposite the ears. The right leg remains straight (fig. 70a). Pull the body forward by the combined action of the arms and the bent leg (fig. 70b). Keep the body close to the floor or ground.

## CHAPTER 8

### GROUP GAMES

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#### Section I. GENERAL

##### **62. Purpose of Group Games in Physical Training Program**

Group games provide activity for large groups, require a minimum of organization and equipment, and are readily adapted to limitations of space or time. In addition, they promote good sportsmanship, cooperation, and opportunities for leadership. While they do provide for competition, their flexible organization tends to keep the competition from becoming too intense.

##### **63. Conducting Group Games**

A few suggestions for the instructor of group games are—

- a.* Give rules and directions for games simply and clearly.
- b.* Stand where you can be seen and heard by everyone.
- c.* Use as few military commands as possible to get the attention of the group.
- d.* Plan games or activities so that each member of the group may be assured active participation and personal enjoyment.
- e.* To insure fairness, be sure teams are evenly matched.
- f.* Be impartial and fair in your decisions.
- g.* Announce the results of contests.
- h.* Control the group at all times. Train players to stop, look, and listen instantly upon hearing your whistle.
- i.* Be able to adapt the game to fit the situation.
- j.* Stop the game before the interest begins to lag.
- k.* Conduct the games in a spirit of fun and good sportsmanship; encourage friendly rivalry.
- l.* Encourage participants to direct activities and develop leadership.
- m.* Anticipate difficulties.
- n.* Stress safety precautions.

#### **Section II. GAMES USED IN PHYSICAL TRAINING PROGRAM**

##### **64. Circle Stride Ball**

*a. Equipment.* Basketball or football. The uncertain bouncing of a football adds interest.

*b. Rules of Game.* Arrange the players in a circle, facing center, legs at stride stand, each foot touching that of the player on either

side. One player is in the center with the ball. She attempts to throw the ball between the legs of the players. The players must keep their hands on their knees until the ball leaves the center player's hands. Then they may use their hands to block it. When the ball goes between a player's legs, that player recovers the ball, returns it to the center, and takes the center player's place. Considerable feinting on the part of the player in the center is frequently necessary to maneuver the ball between the legs of the players.

## 65. Three Deep

a. *Equipment.* None.

b. *Rules of Game.* Choose one player as chaser "It" and another as runner. Arrange the remaining players in a circle. Count off by two. Each number one steps behind the player at her right, making a double circle. "It" chases the runner and attempts to tag her. Neither runner nor chaser is permitted to cut across the circle. The runner may become safe by stopping in front of any group of two and remaining there, thus forming one group that is three deep. "It" can tag the rear one of any group that is three deep. The player who finds herself at the rear of such a group runs before "It" can tag her. The one who is tagged becomes "It" at once and should tag the one who caught her, if possible. The leader should discourage long runs and encourage frequent changes.

c. *Variations.*

- (1) The runner may cut across the circle at will, but the chaser cannot. This variation places the odds in favor of the runner and slows the game.
- (2) Both runner and chaser may cut across the circle at will. This variation provides a much faster and more satisfying game with more frequent changes. Running away from the circle should be prohibited by restricting the play zone close to the sides of the circle.

## 66. Black and White

a. *Equipment.* Disk, black on one side and white on the other.

b. *Rules of Game.* Divide the players into two teams, the "Black" and the "White." Draw two parallel lines 3 feet apart across the middle of the playing space. The space between these two lines is neutral territory. Draw a goal line approximately 30 or 40 feet away from and parallel to each of the two lines. The players line up on either side of the neutral zone, toeing the lines, Blacks on one side and Whites on the other. The disk is tossed into the air so that it falls into the neutral zone. If the Blacks come up, they run back to their goal with the Whites in pursuit. All who are tagged join the Whites. If the Whites come up, the Whites are chased by the Blacks. A player

may chase and tag as many of the opposing team as she can. The game is won by the side that catches all the opponents or that has the larger number when play ceases. If there is no leader, each team may choose a captain to toss the disk in turn. To avoid confusion and argument, a tagger rounds up the players she tags and leads them back to her side.

## 67. Catch the Cane

a. *Equipment.* Baseball bat.

b. *Rules of Game.* Arrange the players in a compact circle not more than 15 feet in diameter. Number the players. Select an "It," give her a baseball bat, and place her in the middle of the circle. "It" sets the bat upright on the floor and steadies it by placing her finger on top. She calls a number and releases the bat. The player holding that number darts for the bat, attempting to catch it before it hits the floor. In the meantime "It" takes the player's position in the circle. If the player catches the bat, she returns to her position and "It" holds the bat again. If the player fails to catch the bat, she becomes "It."

## 68. Center-Miss Ball

a. *Equipment.* Two basketballs.

b. *Rules of Game.* Arrange the players in a circle with one woman in the center. One of the balls is given to the center woman and the other to a player. At a signal, the player passes her ball to the center woman. At the same time the center woman passes her ball to the woman standing on the right of the player, who in turn passes it to the center woman, and so on until the center misses. The player who makes the center miss or fumble the ball exchanges places with her. Passes to the center must be accurate and at chest level.

c. *Variation.* When skill is developed, the type of pass may be specified, such as push pass, over-arm pass, cross-chest pass, or others.

## 69. Bat Ball

a. *Field.* Gymnasium or softball diamond.

b. *Equipment.* Soccer ball, volleyball, or rubber ball; a standard or post.

c. *Rules of Game.* Draw a serving line and a "scratch" line 10 feet in front of the serving line. Set the standard or post in the center of the play area. Divide the players into two teams. One team is at bat; the other team scatters in the field. The batter stands on the serving line, tosses the ball into the air, and bats with her hand or fist. An underhand volleyball serve may be used. The ball must be hit beyond the scratch line. After a successful hit, the batter runs to the post, circles it, and runs back to the serving line. The fielders field the ball and attempt to hit the runner with it. A fielder cannot take more than two steps with the ball. She must pass

the ball to her teammates. If the fielding team commits a foul by running with the ball, hitting the runner on the head, or in other ways designated by the local rules of the game, the runner is safe. The runner is out when—

- (1) She does not hit the ball beyond the scratch line.
- (2) A flyball is caught.
- (3) She is hit by a ball thrown by a fielder.
- (4) She does not make a complete circuit around the post.
- (5) She bats out of turn.

*d. Scoring.* One point for each home run. The game may be timed or run by innings.

## 70. Line Soccer

*a. Field.* An area approximately 30 feet square.

*b. Equipment.* Soccer ball.

*c. Rules of Game.*

- (1) *General.* The object is to kick the ball over the opposing team's goal line. A team consists of 7 to 15 players. The two teams line up on the end line goals facing each other. One or two players may be stationed on the side lines near their goals as linemen to keep the ball in bounds and guard their goal.
- (2) *Plays.* The game is played in relays. The referee stands in the center of the field holding the ball. At a signal, two players, those from each team who occupy the extreme right-end positions, run toward the center. The referee drops the ball so that it bounces, and each of the two players attempts to kick it over the goal of the opposing team. The ball may be advanced only by kicking. Linemen may use their hands to stop it, but are not permitted to throw it. When one of the first players has scored, the two return to their line, taking the position at the extreme left end of their team. The line shifts to the right to make room. The ball is returned to center and, at the next signal, the two players now at the extreme right ends compete.
- (3) *Fouls.* The penalty for a foul is a free kick from the center field. Interference from the opposing runner is not permitted. Fouls are called if—
  - (a) A runner touches the ball with her hands.
  - (b) A lineman bats or throws the ball forward with her hands.
  - (c) A runner pushes, holds, shoves, or blocks the opposing runner.
  - (d) The ball is kicked over the heads of the opposing line.
  - (e) The ball is kicked over a side line.
  - (f) A lineman or guard takes more than one step toward the center.

*d. Scoring.* Two points are scored each time a runner kicks the ball over the goal of the opposing team during play. A ball kicked over by a player other than the runner does not count, and the ball is put in play at the center with the same runners competing. One point is scored each time a successful free kick is made.

## 71. Hit-Pin Baseball

*a. Field.* Gymnasium or softball diamond. The distance between bases varies with the skill of the players. Home base is a circle 3 feet in diameter.

*b. Equipment.* Soccer ball and Indian clubs.

*c. Rules of Game.*

- (1) *General.* Two teams of 9 to 12 players are used, stationed as in baseball. An Indian club is set upright on each base. The object is to score runs. The kicker (batter) stands in the home circle and kicks the ball as it is rolled to her by the pitcher. Having kicked a fair ball, she runs the circuit of the bases without stopping, attempting to reach home base without being put out. To put the runner out, the fielder must throw the ball to each base in sequence, endeavoring to get the ball to a base in time for the baseman to knock the club down with the ball before the runner reaches the base. When three outs are made, the sides change places.
- (2) *Pitching.* The pitcher stands with both feet in the pitching box and rolls the ball with an underhand motion. Any pitched ball striking the kicker is a dead ball; it does not convert the kicker into a runner. Any pitched ball not kicked at by the kicker and not classified as a strike or dead ball counts one ball for the kicker.
- (3) *Kicking.* The kicker stands within the home-base circle. At the time her kicking foot touches the ball, the other foot must be within the circumference of the circle. Three strikes retire a kicker. Four balls entitle the kicker to a free kick. The ball is placed in the front half of the circle and kicked. A kicked ball is considered fair if it strikes within the base-lines and foul if it strikes outside.
- (4) *Strikes.* A strike is called on the kicker when—
  - (a) She kicks at and misses a pitched ball.
  - (b) She kicks a foul ball, except on the third strike.
  - (c) She fails to keep one foot within the circle while kicking.
  - (d) She does not kick a pitched ball that touches the ground in the front half of the home-base circle.
- (5) *Outs.* Three outs retire a side. An out is made when—
  - (a) Three strikes are called on the kicker.
  - (b) A foul ball is kicked from a free kick.

- (c) A foul ball is caught, provided it rises into the air higher than the head of the kicker.
- (d) The Indian club on home base is knocked down either by the kicker or by a pitched ball.
- (e) A flyball is caught.
- (f) A runner is hit by her own kicked ball before it hits the ground.
- (g) An Indian club is knocked down by a fair ball.
- (h) A runner steps inside the baselines.
- (i) A runner knocks down an Indian club.
- (j) The fielding team knocks down a club on a base with the ball before the runner reaches that base.
- (k) A runner interferes with a player inside the diamond.

*d. Scoring.* One run is scored when a runner reaches home base without being put out. One run is scored when a runner is interfered with by a fielder. The game is played in innings.

## **72. Kick Ball**

*a. Field.* Softball diamond.  
*b. Equipment.* Soccer ball or rubber ball.  
*c. Rules of Game.* Softball rules are used, with the following exceptions—

- (1) Kicker stands directly behind homeplate.
- (2) Pitched ball must be below the kicker's knees. A ball is called if not over the plate and below the knees.
- (3) A ball hitting the kicker above the knees is a dead ball. A base runner cannot advance on a dead ball.
- (4) A base runner off base may be put out by being hit by a thrown ball.

## **73. Diamond or Box Ball**

*a. Field.* Gymnasium. A square made by three bases and a home base, or a softball diamond.  
*b. Equipment.* Volleyball, soft rubber ball, or any bouncing ball.  
*c. Rules of Game.* The pitcher tosses the ball so that it bounces once before coming across the plate. The batter strikes the ball with her open hand or clenched fist. The ball must strike in fair territory. If the ball strikes the outside of the diamond, the batter is out; otherwise all softball rules apply.

*d. Scoring.* One point is scored for each successful run. Nine innings make a game.

## **74. Long Base**

*a. Field.* Playing field with a home base, pitcher's box, and one long base. Distance from home to pitcher's box is 30 feet and from the

pitcher's box to long base is also 30 feet. Long base is a marked area, 3 by 6 feet.

*b. Equipment.* Softball and bat.

*c. Rules of Game.* The object of the game is for the batter to hit the ball, fair or foul, and get to long base and back without being put out. There are two teams of no more than 12 players each. When the batter hits the ball, fair or foul, she must run to long base, and either remain there or return to home base. Several players may occupy the long base at once, provided there is one player at home base. All players on long base may return to home base on a hit, running in the same sequence in which they reached the long base. Once a runner has left long base, she cannot return to it. A batter remains at bat until she hits the ball. After three outs, the teams change places. A runner is out when—

- (1) A flyball hit by her is caught.
- (2) The baseman in possession of the ball reaches long base before the runner.
- (3) She is tagged off the base by the ball held by an opposing player.
- (4) She is hit when off base by a ball thrown by an opposing player.

*d. Scoring.* The game is played in innings, as in softball. A run is scored for each runner who reaches home base safely.

## 75. Sock 'Em

*a. Field.* Softball diamond, or gymnasium. Pitcher's box approximately 20 to 30 feet from home base, and bases approximately 40 feet apart.

*b. Equipment.* Rubber ball, 6 to 8 inches in diameter.

*c. Rules of Game.* The game resembles softball except that the ball is hit with the hand and outs are made by hitting the runner with the ball instead of by tagging bases or runner. Any hit ball is a fair ball. Fielders may not run with the ball. The runner may zigzag, dodge, or stop while on the baselines, and the fielders must put her out by hitting her with direct throws from their positions. If the batter hits the ball, she must make home without stopping at bases. If she is walked, she may go only to first base, where she must stay until advanced by the next runner.

*d. Scoring.* Interference by a fielding player will count a score, while interference by a member of the batting team will count as an out. A runner who touches all the bases and reaches home without being touched by the ball scores one run for her team. Each team is allowed three outs. Three strikes are an out, and a caught ball (fly) is an out.

## **76. Corner Ball**

*a. Field.* Approximately 30 by 50 feet, divided by a center line into two courts of equal size. In each corner mark a box 6 to 8 feet square.

*b. Equipment.* Basketball, volleyball, soccer ball, or softball.

*c. Rules of Game.* A team is composed of 8 to 15 players. Each team occupies one court and sends two of its players to occupy the corner boxes within the opposite court. The remaining players are guards. The object is to throw the ball to the corner woman who attempts to catch it. Number the players and after a goal is scored, rotate the members of the scoring team. This gives all players a chance to hold all positions. The game is started by a tossup on the center line between two opposing guards. One team obtains the ball and throws it so that a corner woman may catch it. Guards move freely but may not run with the ball or hold it longer than 3 seconds. They are not permitted to step over the center or corner-box lines. When the ball goes out of bounds, the nearest guard retrieves it and throws it to one of her fellow guards who puts it into play at once.

Fouls are counted for—

- (1) Taking more than one step while holding the ball.
- (2) Holding the ball longer than 3 seconds.
- (3) Stepping over center or corner-box lines.

*d. Scoring.* One point is scored each time a corner woman catches a flyball and each time the opposing team commits a foul. The game consists of two 10-minute periods.

## **77. Snatch**

*a. Field.* Any fairly level area approximately 30 feet wide, with a goal line at each end.

*b. Equipment.* Indian club or similar object.

*c. Rules of Game.* Any size group may play this game. Divide the group into two teams. The teams line up on the goal lines, face center, and count off. Place the Indian club in the center of the field. When the referee shouts a number, each of the two women having that number races from her goal line toward center, attempting to snatch the Indian club and carry it across either goal line without being tagged by her opponent.

*d. Scoring.* Two points are scored for crossing either goal line with the Indian club; one point for tagging.

*e. Variations.*

- (1) Call more than one number at a time.
- (2) Place more than one Indian club in the center.
- (3) If the group is large, count off by fives or tens. In this variation several persons from each team will run to center when one number is called.

## **78. Beater Goes Round**

- a. *Field.* Any fairly level area.
- b. *Equipment.* Knotted turkish towel (beater).
- c. *Rules of Game.* The players form a circle, facing counterclockwise, with their hands behind their backs. The person selected as "It" takes the beater, runs clockwise around the outside of the circle, and places the beater in the hands of a player. The player receiving the beater swats the player ahead of her and chases her around the circle, beating her as often as possible until she gets back to her starting place. The player holding the beater then becomes "It." When "It" hands the beater to another player, she steps into the place vacated. As a safety precaution, players should be cautioned to hit the hips or legs.
- d. *Variation.* The players forming the circle face center, keeping their hands behind them. The player receiving the beater swats the player to her right.

## **79. Circle Dodge Ball**

- a. *Field.* Gymnasium or playground.
- b. *Equipment.* Volleyball or soccer ball.
- c. *Rules of Game.* Two teams are chosen. One team forms a circle enclosing the other team. The circle team throws the ball, attempting to hit the players inside the circle. If a player is hit, she is eliminated. The game continues until all players within the circle have been eliminated. They may dodge, jump, or avoid the ball in any way except by leaving the circle. If a player is hit by the ball thrown by a person who, when throwing, has stepped inside the circle, she does not have to leave. Teams change positions when one team has been eliminated. To protect against injuries, the ball should be thrown to hit below the waist.
- d. *Scoring.* Clock the time required to eliminate the players of each team. The winning team is the one that stayed inside the circle longer.
- e. *Variation.* An individual winner may be determined. The winner is the one of the entire group who stays inside the circle longest. In this variation persons who have been eliminated may join the circle.

## **80. Three-Team Dodge Ball**

- a. *Field.* Gymnasium or playground.
- b. *Equipment.* Volleyball or soccer ball.
- c. *Rules of Game.* The area is divided into three equal courts. Players are divided into three teams. One team occupies the court at one end; the second team, the court at the other end; the third team, the middle court. Appoint a timekeeper. The ball is given to either

one of the end teams, who then work together to eliminate the members of the center team by hitting them with the ball. Any member of the center team hit by a flyball on or below her hips leaves the court. A person hit above the hips is not out. A player is not out if hit by a ball thrown by a member of either end team who has crossed the line into the middle court. When all three teams have occupied the center court, the times are compared, and the team that occupied the center court the longest wins.

## **81. Chain Dodge Ball**

- a. Field.* Any level area.
- b. Equipment.* Soccer ball or volleyball.
- c. Rules of Game.* A group of 20 to 40 players is divided into teams of 5 or 6 women. One team forms a chain, each woman grasping the player in front of her around the waist. Members of the other teams form a circle around the chain and attempt to hit the end woman with the ball. Players forming a circle may pass the ball around in any manner. The players in the chain attempt to keep the end woman from being hit. Only the first woman of the chain may use her hands to prevent the ball from striking the end woman. When the end woman of the chain is hit, she leaves the chain. Players then throw at the new end woman and continue until the entire team is eliminated. Each team in turn should go into the circle until all have had an opportunity to act as the chain.
- d. Scoring.* Clock the time. The team that stays in the circle longest wins the game.
- e. Variation.* Do not play as a team game. Select five women to form the chain. The person who succeeds in hitting the end woman with a ball takes the position as first woman in the chain.

## **82. Netball**

- a. Field.* Bounded area approximately 25 by 50 feet.
- b. Equipment.* Volleyball, soccer ball, or basketball; net or rope. Stretch the net or rope across the center of the court at a height of 7 feet. Mark off an area 6 feet on either side of the net or rope as a neutral zone.
- c. Rules of Game.* Divide the players into two teams, 8 to 20 women on a team. Each team is distributed evenly over its court. No player may enter the neutral zone. The object of the game is to throw the ball over the net into the court of the opposing team. The opposing team tries to catch the ball before it hits the floor. Play is started by a player designated to throw the ball into the opponents' court. Any player may catch the ball but must throw it back over the net immediately. The ball is played only by catching and throwing. A player may not walk with the ball, hold it, or relay it to a teammate.

Play continues until a point is scored. After a score, the ball is put into play by the team scored against. The woman closest to the ball puts it back into play. Fouls are counted if—

- (1) The ball goes beyond the opponents' court and is not touched by that team.
- (2) The ball is relayed, touches or goes under the net, or goes out of bounds. (If played indoors, a ball hitting the walls or ceiling is out of bounds.)
- (3) A player holds the ball or walks with it.
- (4) A player steps into the neutral zone, except to retrieve the ball.

*d. Scoring.* One point is scored when the ball touches the floor or a foul is made. The game may be played to 21 points or in halves and quarters.

## CHAPTER 9

### RELAYS

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#### Section I. GENERAL

##### 83. Purpose

Well-selected relays are excellent conditioning activities and inject a spirit of friendly rivalry into the physical training program. Interspersing them throughout the program provides a desirable change of activities. They lend themselves to large groups within general areas. They are easy to control and offer a maximum of individual participation.

##### 84. Procedures

###### a. *Forming Teams.*

- (1) Line the groups in one rank, according to height. Have the players count off according to the number of teams desired. On command, have the number ones stay in place; number twos take one step forward; number threes, two steps; number fours, three steps; and so on.
- (2) Appoint a captain for each team and instruct her to take her team to the starting line and form a file.
- (3) When the teams are uneven, have the players on the short team run more than once. In pass relays, ask extra players from other teams to drop out and officiate. After each relay, have them rejoin their teams and let other players fall out.

b. *Starting and Turning.* Establish a common starting line for all teams. Establish another line parallel to it 40 to 60 feet away. This is the turning line. Indoors, a wall may be used as the turning line, the runner touching the wall and running back to the starting line. To prevent injuries, however, it is desirable to establish both starting and turning lines at least 6 feet away from the walls.

c. *Determining the Winning Team.* Mark the last player of the team conspicuously. This enables judges and players to see when the last runner of a team is running. Marking may be done by tying a handkerchief around the last player's arm. Having all the members of a team sit when the last runner finishes is strongly recommended. When several relays are to be run in succession, scores should be kept for each relay and the cumulative score used to determine the winning team.

## **85. Methods of Conducting**

Most relays can be conducted from a number of different formations. The instructor can add interest by adapting a given relay to different methods. Three common methods of conducting relays follow.

*a. Lane Method.* For simplicity of explanation most relays described in paragraphs 88 through 113 use the lane method.

- (1) Teams of the same number of women are arranged in parallel columns 10 feet apart behind a common starting line facing the same direction.
- (2) A turning point is established in front of each team. The distance from the starting line to the turning point varies with each race. Each performer travels from the starting line to and around the turning point and back to the starting line, where she touches off the next one of her teammates and then goes to the end of the line. This continues until each has taken her turn.

*b. Shuttle Method.* Two starting lines are marked parallel to each other and the desired distance apart. Each team counts off by twos. The odd-numbered half of each team alines itself at one starting line; its even-numbered half, at the other starting line. The teams face each other across the distance to be run. The race is run by having the number ones of each team run to the opposite line and touch off the number twos of the team, who run back and touch off the number threes and so on. Each woman, after touching her teammate, goes to the end of the line. This continues until each woman has taken her turn, or until all have returned to their original positions. In the latter situation, all women perform twice.

*c. Circle Method.* This type of relay is conducted around a track which may be marked by placing four objects so that they form a rectangle of the desired size, the track being outside the objects. This type of relay may be conducted with all the teams using a common starting line or using separate starting lines evenly distributed around the track. To run the race, the first player of each team travels around the track. When she returns to the starting line, she touches off the next player of her team. This continues until all the women have run.

## **86. Scoring**

*a.* The simplest method of scoring relays is to award 3 points to the team finishing first, 2 points to the team finishing second, and 1 point to the team finishing third. Cumulative scores for several relays are kept and the team with the highest total score is declared the winner.

*b.* Another method is to award 1 point to the team finishing first, 2 points to the team finishing second, and so on until each team has

been awarded a score. To this score is added the number of fouls committed by each team during the race. The team with the lowest score wins.

c. Fouls, such as starting before being touched off, not crossing the turning line, or interfering with members of another team, may be called in any relay race. Some relays will include special features which will increase the types of fouls to be called. Before a race begins, the instructor should announce which errors will be considered fouls.

## **87. Methods of Locomotion**

Relays may be altered by introducing different methods of locomotion. Suggested forms of locomotion are— running backward, running on all fours, running backward on all fours, hopping, skipping, moving on one hand and both feet, and moving on both hands and one foot.

# **Section II. RELAYS USED IN PHYSICAL TRAINING PROGRAM**

## **88. All-Up Relay**

a. *Equipment.* Indian clubs.

b. *Description.* At the turning line and directly opposite each team, mark 2 tangent circles of like diameter and place 3 Indian clubs in 1 of the circles. At a signal, the first player of each team runs to the clubs and, using one hand only, picks them up and sets them upright in the other circle. She then returns and touches off the second player, who in the same manner returns the clubs to the original circle. This is repeated until each has run. If a club falls before a runner reaches the starting line, the runner must return and set the club up again.

c. *Variations.*

- (1) Using one circle only, the runner upon reaching the clubs, knocks them over with her foot and then resets them in the circle.
- (2) Using one circle only, the runner picks up one club at a time, strikes the top of the club on the floor, and resets it in the circle.

## **89. Human Hurdle Relay**

a. *Equipment.* None.

b. *Description.* Arrange the teams in circles, facing outward. The players seat themselves at least 12 inches apart with legs extended and close together, feet pointing away from the center of the circle. Each circle counts off from left to right. At a signal, number one stands, faces right, and runs or jumps over the legs of all the players

until she is back to her position. She then sits down and touches off number two. The team wins whose last player is first to reach her original sitting position.

## **90. Medley Race**

- a. *Equipment.* None.
- b. *Description.* Number the players and instruct each how she is to move when her turn comes. Various methods of locomotion are assigned. Some may be instructed to hop on one foot to the turning line and to run back; others to go on all fours. Any method or combination of methods of locomotion may be used.

## **91. Overhead Passing Relay**

- a. *Equipment.* Basketball, volleyball, or soccer ball.
- b. *Description.* Have the players separate so that each can just touch the woman in front of her. Mark the floor by the feet of the first and last players of each team. These two players must keep their feet on these lines. Give the first player of each team a ball. At a signal, the ball is relayed overhead toward the rear of the line. When the last player gets the ball, she calls "ABOUT FACE." The players turn around and the ball is relayed in the same manner until the first player again has the ball.

## **92. Over and Under Passing Relay**

- a. *Equipment.* Basketball, volleyball, or soccer ball.
- b. *Description.* Same as in paragraph 91 except that the first player passes the ball overhead to the second player; the second player passes it between her legs to the third, who passes it overhead to the fourth until the last player gets it. She calls "ABOUT FACE" and starts the ball back by passing it over her head.

## **93. Rope-Skipping Relay No. 1**

- a. *Equipment.* One skipping rope approximately 8 feet long for each team.
- b. *Description.* Place a rope on the turning line in front of each team. At a signal, the first player in each team runs to the turning line, picks up the rope, and skips or jumps it in any style 4 times. She then drops the rope, returns to the starting line, and touches off the second player.
- c. *Variation.* Specify the style of skipping or jumping: single jump, double jump, running in place, jumping with one leg, jumping backward, or any combination.

## **94. Rope-Skipping Relay No. 2**

- a. *Equipment.* Same as in paragraph 93.
- b. *Description.* Give the first player of each team a rope. At a

signal, she runs to the turning line, jumping over the rope 3 times en route. She returns in the same manner and touches off the second player by handing her the rope. When players are experienced at rope skipping, they may be required to jump the rope every other step.

### **95. Run-Sit Relay**

- a. Equipment.* None.
- b. Description.* The first player runs to the turning line, sits on the floor, raises her feet, taps them together 3 times, rises, returns, and touches off the second player.

### **96. Zigzag Relay**

- a. Equipment.* Five Indian clubs for each team.
- b. Description.* Directly in front of each team and near the turning line set a line of 5 Indian clubs 3 feet apart. At a signal, the first player runs forward, zigzags between the clubs, races back to the starting line, and touches off the second player. Knocking over a club constitutes a foul.

### **97. Bowling Relay**

- a. Equipment.* Three Indian clubs and a basketball or volleyball for each team.
- b. Description.* The turning line should be approximately 40 feet from the starting line. Place the 3 Indian clubs in a row, 1 foot apart on the turning line in front of each team. Give the first player of each team a ball. She rolls the ball toward the clubs, attempting to knock them down. She then runs forward, gets the ball, and carries it back to the second player, who has moved up to the starting line. The game continues until one team has knocked down all its clubs. The first team to bowl down the clubs scores one point. All the clubs are then set up and the contest starts again, with the next player in order bowling first.

### **98. Izzy Dizzy Relay**

- a. Equipment.* Ball bat for each team.
- b. Description.* The first player holds the bat upright on the ground, the palm of her hand over the top, her forehead on the back of her hand. She revolves around the bat 8 times, drops it, and starts to run to the turning line. As soon as the first player has dropped the bat, the second player picks up the bat, revolves around it in the same manner until the first player returns. The second player then runs, while the third picks up the bat and begins to revolve, and so on until each has had her turn.

## **99. Shoe Relay**

*a. Equipment.* None.

*b. Description.* A line is drawn halfway between the starting line and the turning line. At a signal, the first player runs to the halfway line, takes off her shoes, and continues to the turning line. She turns, runs back to the halfway line, puts on her shoes, and returns to the starting line, where she touches off the next player.

## **100. Japanese Crab Relay**

*a. Equipment.* None.

*b. Description.* Players line up with their backs to the turning line. The first player takes her position with heels on the starting line and hands on the ground like a Japanese crab. At a signal, she moves in crab fashion to the turning line. She returns to the starting line in normal running style and touches off the next player, who must duplicate her performance.

## **101. Bullfrog Relay**

*a. Equipment.* None.

*b. Description.* Players line up on the starting line with hands on hips. At a signal, the first player assumes the deep knee bend and hops to the turning line and back. Each hop must start from the deep knee-bend position, and hands must be kept on hips.

## **102. Sore Toe Relay**

*a. Equipment.* None.

*b. Description.* The first player grasps one foot in both hands and hops to the turning line on the other. At the turning line, the player changes and hops back on the other foot to the starting line, where she touches off the second player.

## **103. Goat Butting Relay**

*a. Equipment.* Volleyball, basketball, or soccer ball.

*b. Description.* A ball is placed in front of each team. The first player takes a position on hands and knees. She "butts" the ball with her head to the turning point and back to the starting line, where she touches off the second player. The ball must be played with the head only.

## **104. Back-to-Back Relay**

*a. Equipment.* None.

*b. Description.* Players move in pairs back to back with elbows linked, one walking forward, the other backward. At a signal, the first pair moves to the turning line, returns to the starting line, and touches off the second pair. Players may reverse going back to the starting line.

## **105. Kangaroo Relay**

*a. Equipment.* Basketballs.  
*b. Description.* A ball is given to the first player of each team. Without touching the ball with her hands, the first player holds the ball between her knees, and hops to the turning line and back. She touches off the second player who duplicates her performance.

## **106. Wheelbarrow Relay**

*a. Equipment.* None.  
*b. Description.* Players move in pairs, one walking on her hands while her partner grasps her ankles. At the turning point they may reverse their positions.

## **107. Foot-Dribble Relay**

*a. Equipment.* Soccer balls.  
*b. Description.* Place a soccer ball in front of the first player of each team. At a signal, the first player dribbles the ball with her feet across the turning line and back to the starting line. On her return to the starting line, each player must maneuver the ball directly in front of the next player so that she can kick it without moving from her starting position. Using the sides of the feet to kick the ball keeps it on the floor.

## **108. Circle Overtake Relay**

*a. Equipment.* Basketball, volleyball, or soccer ball.  
*b. Description.* Arrange the players in a circle and have them count off by twos, thus dividing the group into two teams, each team consisting of every other woman in the circle. Designate as captains two opposing players who stand directly opposite each other. Give each a ball. The balls should be differentiated by color or some other type of marking. The balls are passed by hand from player to player in the same direction, the object being to overtake the other team's ball. If a ball is dropped, the player who dropped it must get it, return to her position, and pass it on.

## **109. Catch, Throw, and Sit Relay**

*a. Equipment.* Balls of any type.  
*b. Description.* Line the group against the walls of the gymnasium or form a hollow square facing toward the center. Each side of the square forms a team. Mark a circle 3 feet in diameter in front of each team and designate one player as captain. Station each captain in the circle and give her a ball. At a signal, each captain throws the ball to the player on the extreme right of her team, who catches it, throws it back, and then sits down on the floor. The captain then throws the ball to the next in line and so on until all the players are

seated. The captain must keep one foot in the circle while throwing. If any player or captain fails to catch the ball, she must recover it and return to her position before throwing. When the players are more skilled, the types of throw may be specified.

### **110. Run and Throw Relay**

*a. Equipment.* Balls of any type.

*b. Description.* Give the first player of each team a ball. At a signal, the first player runs to the turning line, turns, and throws the ball to the second player. The second player catches it, runs with it to the turning line, and throws it to the third. As soon as a player has thrown the ball, she goes to the position at the turning line that compares to the one she had held at the starting line. If a player fumbles the ball, she must recover it and return to the starting line before beginning her run to the turning line.

### **111. Throwing Shuttle Relay**

*a. Equipment.* Balls of any type.

*b. Description.* Arrange the teams approximately 40 feet apart. Give the first player of each team a ball. The first player throws the ball to the second player and moves to the end of the line. The second player throws the ball to the third and moves to the end of the line, and so on. If a player drops the ball, she must recover it and return to her position before throwing it.

### **112. Basketball Relay**

*a. Equipment.* Basketballs, backboard, and basket.

*b. Description.* The first player of each team is given a basketball. At a signal, she moves forward and attempts to make a basket, shooting until a basket is made. She recovers the ball, runs with it to the starting line, and gives the ball to the second woman, who continues the play. If the players are skilled, types of shots may be assigned.

*c. Variations.*

- (1) Players dribble the ball into shooting position. After a basket is made, the ball may be passed back to the second player.
- (2) Players pass the ball to the rear of the line, either over their heads or between their legs. The last woman runs to shooting position. After making her basket, she returns to the front of the line and puts the ball into play.

### **113. Pass and Squat Relay**

*a. Equipment.* Basketball, soccer ball, or volleyball.

*b. Description.* Arrange the teams in a line with a captain about 10 feet in front of and facing each team. The captain tosses the ball

to the first player in the line, who passes it back to her and immediately squats. The captain tosses the ball to the second player, and so on. If any player misses the ball, she must recover it, return to her position, and pass it to the captain before squatting.

## **CHAPTER 10**

### **TEAM SPORTS**

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#### **Section I. TEAM SPORTS IN THE PHYSICAL TRAINING PROGRAM**

##### **114. Purpose**

*a. General.* Team sports deserve a prominent place in the physical training program. They are valuable as body conditioners. Because of the natural appeal of team sports, women participate with energy and enthusiasm. Through competition, team sports provide a laboratory where initiative, persistence, teamwork, confidence, and the ability to think and act quickly and effectively under pressure may be practiced and developed. Because of their popularity, team sports are an effective means of developing and maintaining the interest and cooperation of the women in the rest of the physical training program.

*b. Morale Building.* Team sports can do much to lift the general morale of the entire unit. Athletic teams are a strong unifying influence and provide an excellent means of developing *esprit de corps*. Competitive sports offer a diversion from regular duties and give the spectators, as well as the players, an opportunity for self-expression.

##### **115. Space and Equipment Requirements**

Sports and games require more space and equipment than other physical training activities. Few organizations can provide facilities for participation of more than a small percentage of the women at one time. This problem can be solved in part by selecting sports that use large numbers of participants, by increasing the number of players per team in certain sports, by modifying the size of the playing areas, and by careful scheduling. Another method is to divide large groups and to schedule concurrent activities that require less space and equipment.

##### **116. Choice of Activities**

It is important to maintain balance in the various team activities. To some extent this is regulated by normal sport seasons. The interests and desires of the women should also be considered in planning a program, particularly in field units. However, the personal preferences of a few may influence the choice of activities to the point that the program becomes one-sided. This can be avoided by projected plans based on the needs of the entire group rather than upon the desires of a few.

## **117. Recreational Athletics**

*a.* The physical training program and recreational athletics may complement each other, or recreational athletics may be a supplement to the physical training program. Some women do not enjoy athletic activities enough to engage in them during off-duty hours. For these women the physical training program is the main factor in keeping physically fit. Other women regard the physical training program as a laboratory for perfecting skills that will enable them to enjoy recreational athletics more fully. In either case the physical training is the basic factor, with the recreational program an added attraction.

*b.* Recreational athletics may be informal or organized. In an informal program, competition is not highly organized. Composition of teams varies from day to day; no regular schedule is played; activities may be either group games or the more common team sports. In organized athletics on the other hand, competition is more highly organized. Teams remain intact and definite schedules are met. Organized athletics often include games with teams of other units.

## **118. Policies Governing Athletic Activities**

*a. Coaching.* Women taking part in organized athletics must have ample opportunity to get into condition. Part of this conditioning can be done in the regular physical training program but more concentrated work is needed to bring these women to the standard of fitness required for athletic competition. Well-selected coaches who can instruct the women in team and individual skills are needed to carry out this phase of the program. Whenever possible women coaches should be used.

*b. Providing Officials.* Every effort should be made to provide competent officials for all athletic competition. Nothing causes dissatisfaction among participants more quickly than poor officiating. Whenever possible, women should be used as officials. If female officials are not available men may be used until competent women can be trained.

*c. Following Standard Rules.* It is recommended that rule books of the National Section of Women's Athletics, American Association of Health, Physical Education, and Recreation, be obtained. These will be useful for information and guidance for official playing rules, dimensions and marking of fields, necessary equipment, and the fundamentals of play.

## **119. Tournaments**

*a. General.* Tournaments keep interest and enthusiasm at a high point. The type of tournament used is determined by the length of time available, the number of teams participating, and the type of

activity. The various methods of organizing athletic competition can be found in chapter 6, Department of the Army Technical Manual 21-225, 14 February 1951.

8 TEAMS								7 TEAMS							
A	B	C	D	E	F	G	H	A	B	C	D	E	F	G	BYE
A	1	2	3	4	5	6	7	A	1	2	3	4	5	6	7
B		3	4	5	6	7	2	B	3	4	5	6	7	2	
C			5	6	7	1	4	C		5	6	7	1	4	
D				7	1	2	6	D			7	1	2	6	
E					2	3	1	E				2	3	1	
F						4	3	F					4	3	
G							5	G						5	
H															

Figure 71. Round robin schedule for tournament.

b. *Round Robin* (fig. 71). If 8 or fewer teams are participating, the round robin schedule is best. In the round robin each team plays every other team and the winning team is determined on a percentage basis (the number of games won as against the games played). The following diagram shows the method of determining the playing schedule for a round robin tournament. The number indicates the round in which two teams meet; for example, team C meets, in turn, G, A, B, H, D, E, and F. Bye indicates that no game is played and that the team given a bye is awarded a nominal win.

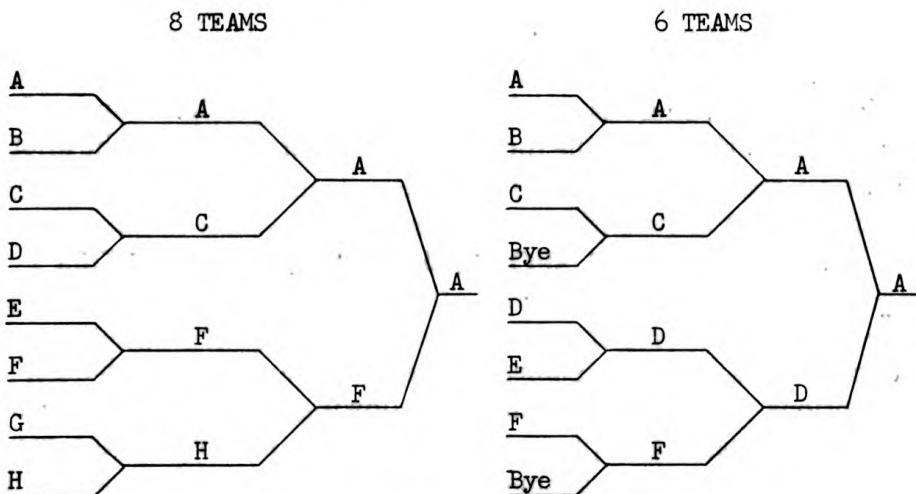
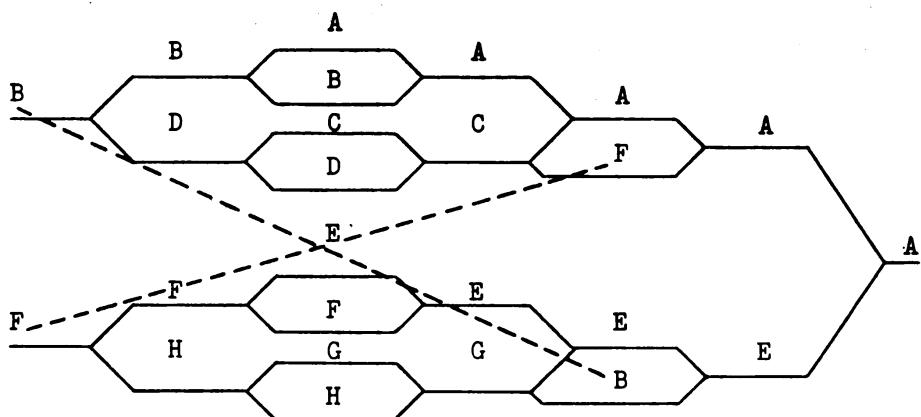


Figure 72. Single elimination schedule for tournament.

c. *Single Elimination* (fig. 72). This is the fastest method of determining a winner. After each game the losing team is dropped from the tournament and winning teams move on to play other winners. In elimination tournaments brackets are set up on powers of 2. When the number of teams competing cannot be set up in powers of 2, byes are used to make up the difference.



*Figure 73. Double elimination schedule for tournament.*

*d. Double Elimination* (fig. 73). The double elimination tournament is based on the same principle as the single. Losers of the first round form a second level tournament, the winners of which are reentered in competition with teams of the first level. The advantage of the double elimination tournament is that it compensates to some extent for off nights. The above diagram shows the method of reentry and general form of the tournament.

*e. Ladder Tournament.* The ladder tournament is of value for individual sports such as tennis, but it may also be used for team sports. Participants are arranged in a list, or ladder. Games are played on a challenge basis over a designated period of time. A participant may challenge anyone higher than herself on the ladder. The winner of the game occupies the higher position, the loser the lower. If the challenger loses, there is no change in position. The winner of the tournament is the one at the top of the ladder at the end of the allotted time.

## Section II. TEAM SPORTS AS ATHLETIC ACTIVITIES

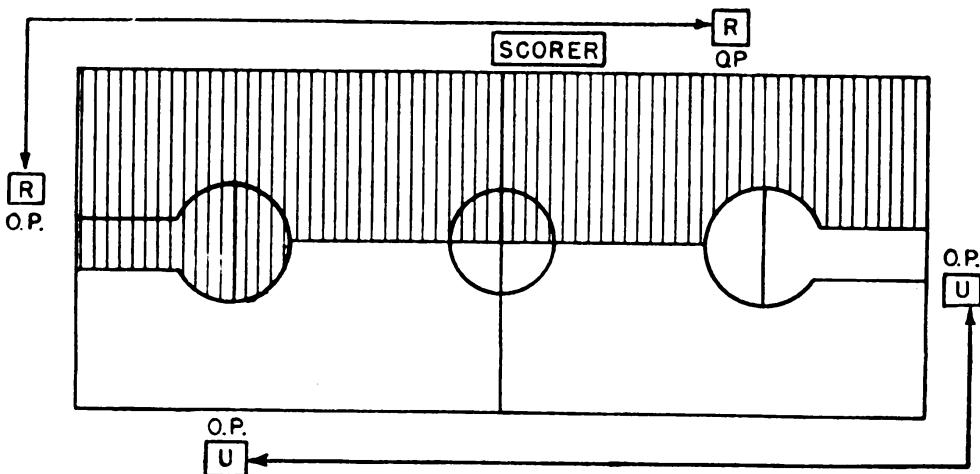
### 120. General

Because the rules of games are subject to constant change, the descriptions of team sports in the following paragraphs have been made very general and present only the basic features of the games. For the same reason, diagrams of playing areas have been simplified. It is recommended that current official rules for all athletic contests be obtained and followed (par. 118c).

### 121. Basketball

*a. Court.* The playing court is a rectangular surface, divided into two sections and free from obstruction. The official maximum size is 94 feet long by 50 feet wide (fig. 74).

*b. Equipment.* Basketball.



*Figure 74. Basketball court.*

*c. Description.* The game of basketball is played by two teams, each composed of 6 players, one of whom is captain. There may be any number of substitutes. Each team has 3 forwards and 3 guards. The object of the game is for each team to score by getting the ball into its own basket and, at the same time to prevent the other team from scoring. The ball is passed from one player to another. A goal made from the field counts 2 points. A goal made from the free-throw circle counts 1 point.

*d. Playing Regulations.* The game is started by the referee, who puts the ball into play by a center throw. The game consists of 4 quarters of a maximum of 8 playing minutes each, with 2-minute intermissions between the first and second quarters and between the third and fourth quarters, and a 10-minute intermission between the halves. The teams exchange goals at the end of the first half. At the beginning of each quarter the ball is put in play at the center.

*e. Violations and Penalties.* A violation is an infringement of a rule that involves holding the ball more than 3 seconds or traveling with the ball. The penalty for a violation is for the ball to be put into play from out-of-bounds by a member of the opposing team.

*f. Fouls and Penalties.*

(1) *General.* Although basketball is theoretically a noncontact game, it is obvious that players moving rapidly over a limited space cannot entirely avoid personal contact. Such personal contact should not be penalized unless accompanied by roughness. Likewise, accidentally touching the ball against the hands or arms of a guarding player should not be penalized if the ball or hands are withdrawn immediately, thus avoiding roughness or hindrance to the opponent.

(2) *Technical fouls.* A technical foul is a foul not involving personal contact.

- (3) *Personal fouls.* A personal foul is a foul involving personal contact, such as obstructing, charging, blocking, holding, tagging, tripping, pushing, guarding with personal contact, or committing any form of unnecessary roughness.
- (4) *Free throws.* When fouls occur, free throws are awarded to the opposing team.

*g. Disqualifications.* A player is automatically disqualified and removed from the game when she has committed any one of the following:

- (1) Five technical fouls.
- (2) Five personal fouls.
- (3) A total of five fouls, technical and personal combined.
- (4) A single disqualifying foul.

*Note.* For specific rules and regulations refer to Official Basketball Guide published by American Association for Health, Physical Education, and Recreation.

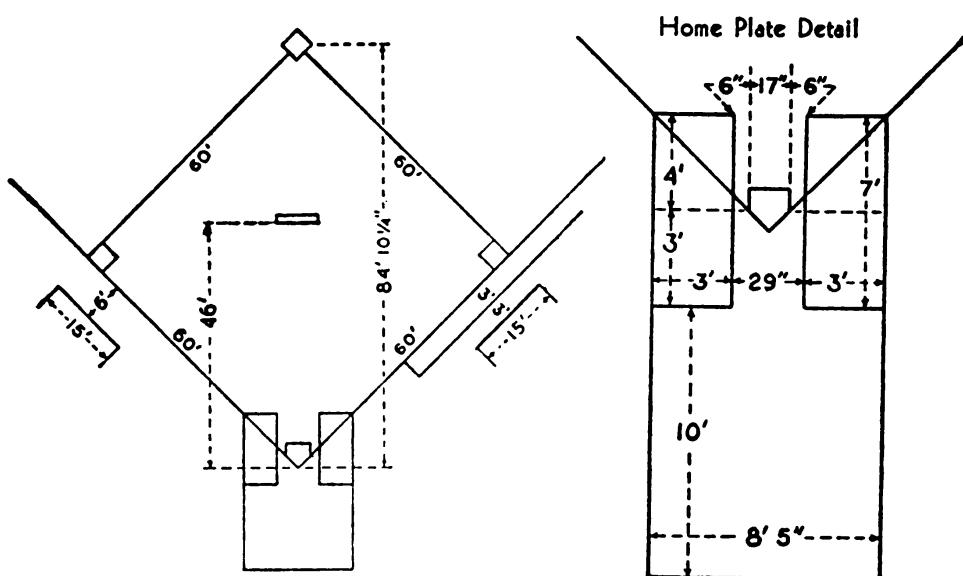
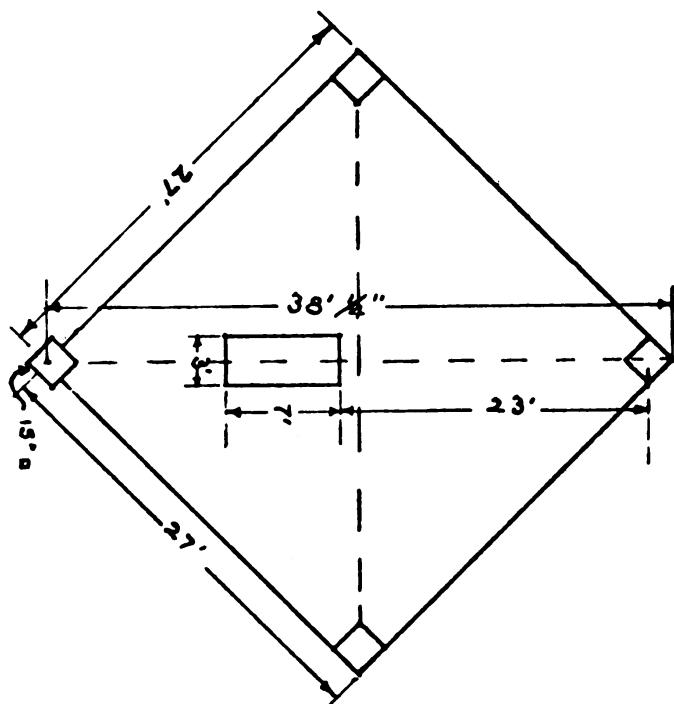
## 122. Softball

*a. Field.* Softball diamond (fig. 75).

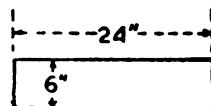
*b. Equipment.* A bat, a softball, 3 bases, and a homeplate. Gloves and mitts are recommended but are not necessary. The catcher should be provided with a mask and a body protector.

*c. Description.*

- (1) *General.* The object of the game is to score runs. The batter stands at homeplate and bats the ball as it is pitched to her by the pitcher. Having batted the ball into the field, she attempts to make a complete circuit of the bases and touch homeplate without being put out. When 3 outs have been made, the teams change places.
- (2) *Pitching.* The pitcher must have one foot on the mound (pitcher's plate) until the ball has left her hand. Only the underhand pitch may be used. The pitcher's objective is to strike the batter out. The batter is out if 3 strikes are called on her.
- (3) *Batting.* The batter is to hit the ball into the field so that she will be able to run the bases without being put out.
  - (a) *Fair ball.* A fair ball is a batted ball which settles on fair territory between home and first base or home and third base, or which has rolled or bounced into fair territory in the outfield beyond first and third bases.
  - (b) *Foul ball.* A foul ball is a batted ball that lands in territory other than that prescribed for a fair ball.
  - (c) *Strike.* A strike is called when the batter strikes at and misses the pitched ball; when the batter hits a foul ball; when a pitched ball crosses some portion of homeplate at a level between the shoulders and knees of the batter but is not struck at by the batter.



## **OFFICIAL DIMENSIONS OF SOFTBALL DIAMONDS**



*Figure 75. Softball diamond.*

(d) **Ball.** A ball is called when a pitched ball does not cross the plate in the area designated for a strike and is not struck at by the batter.

- (e) *Dead ball.* A dead ball is a pitched ball at which the batter does not strike and which touches some part of her person or clothing. When a dead ball is called, all play ceases until the ball is again put in play by the pitcher.
- (4) *Base running.* When running the bases, a runner may overrun first base provided she turns away from the field of play when returning to the base. No other base may be overrun. The runner may attempt to run 1, 2, or 3 bases, or 3 bases and home, depending upon how fast the ball is played.
- (5) *Fielding.* There is no prescribed way to catch or throw a ball while fielding.
- (6) *Outs.* The batter is out if 3 strikes have been called on her; if she fails to get to first base before the ball is held by a fielder who is touching first base; or if she hits a flyball that is caught by some member of the team in the field before the ball touches the ground. A base runner is out if she is tagged while off base or if she fails to reach a base before the ball is held by a fielder who is touching that base.

*d. Scoring.* When a runner has returned to homeplate after making a circuit of the bases without being put out, the team is given one point. (For more detailed information refer to the Official Softball-Volleyball Guide.)

## 123. Volleyball

*a. Field.* Standard volleyball court, indoors or outdoors (fig. 76).

*b. Equipment.* Net placed  $7\frac{1}{2}$  feet high; volleyball.

*c. Description.* The game requires 2 teams with 8 players on each team. The object of the game is to hit the ball over the net in such a way that the opposing team cannot return it. The ball is put into play by the server in the back right-hand corner. The server must stand with both feet outside the rear boundary line and strike the ball over the net with her hand. Her hand may either be open or closed as she serves. The ball should not touch the net as it goes over and must fall within the opposing team's court. The members of the opposing team attempt to return the ball over the net by striking it with their hands. Only the serving team scores. When the serving team fails to score, "side-out" is called and the opposing team is awarded the ball and becomes the serving team. When "side-out" is called, the team receiving the ball rotates one position before beginning to serve, as indicated in figure 76.

*d. Scoring.* The game may be played to 21 points or may be played in 2 halves of 15 minutes each. One point is awarded to the serving team or the ball is awarded to the nonserving team when—

- (1) The ball goes out of bounds.
- (2) The ball is caught or thrown.

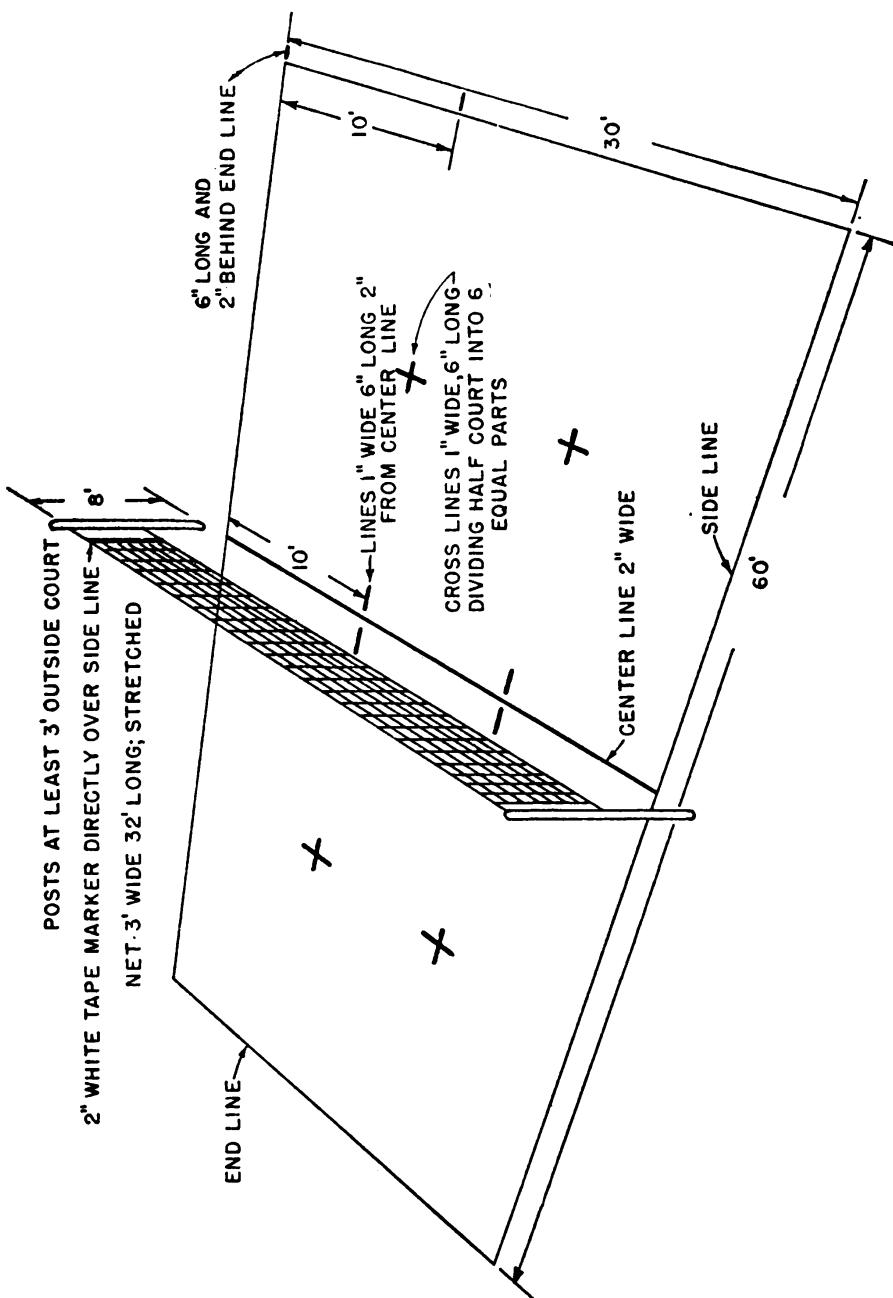


Figure 76. Volleyball court.

- (3) The ball touches any part of a player except her hands.
- (4) A player steps on a boundary line.
- (5) A player touches the net while the ball is in play.
- (6) The ball is not returned.
- (7) The ball is played by more than 3 players on a team before it is returned.
- (8) A player strikes the ball more than twice in succession.
- (9) The ball is played into the net and not subsequently played over the net before it strikes the ground.
- (10) A serve is unsuccessful.

## **124. Other Athletic Activities**

Many other team sports may be included in a physical training program if facilities and equipment permit. Soccer, speedball, and field hockey are excellent activities, but they require more space than is usually available and tend to be less acceptable than the more widely known sports. If the less well-known sports are introduced, it will be found necessary to increase the amount of instruction and coaching. Individual activities such as bowling, tennis, and archery should be encouraged. Skills and techniques for these sports can be taught in classes if facilities, equipment, and instructors are available.

## CHAPTER 11

### SWIMMING AND LIFESAVING

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#### Section I. GENERAL

##### **125. Value of Swimming in Physical Training Program**

Swimming is an excellent activity for body conditioning and is one of the finest means of developing grace and coordination. Swimming not only has outstanding recreational value but is vital to survival in water accidents and marine disasters. Whenever and wherever facilities permit, swimming should be incorporated into the physical training program.

##### **126. Facilities**

Many military installations are equipped with good swimming facilities. Trained personnel are usually available to supervise the swimming program. If swimming facilities are not located on the post, it may be possible to use nearby civilian facilities for recreational purposes or even for actual instruction.

##### **127. Administration**

*a. Personnel.* Swimming instructors should be qualified American Red Cross water safety instructors. Lifeguards should be Red Cross senior lifesavers or persons with similar qualifications. Male personnel may instruct or supervise this activity. However, it is advisable to use trained female instructors and lifesavers if they are available in the unit, because the use of female personnel makes it easier to maintain control over the program.

*b. Sanitation.* The sanitation of post swimming facilities is the responsibility of the post medical inspector. The unit commander should make careful inquiry into the sanitation of any civilian facilities contemplated for use.

*c. Scheduling.* Considerable care should be exercised in scheduling swimming periods. It is inadvisable to schedule swimming immediately after a meal hour. The policy of waiting 1 or 2 hours after eating before going swimming is generally accepted. Some thought should also be given to the time required by the women to dry their hair after swimming. Therefore the hours immediately preceding the noon hour or the hours preceding the end of the duty day are best for swimming.

*d. Personal Hygiene.* It is no longer considered physically dangerous for most women to swim during their menstrual period, if

shock due to sudden change of temperature is not incurred. However, when using swimming pools, it is advisable to excuse women during this period for sanitary reasons. When lakes or beaches are used, it is a matter of personal preference.

*e. Policies and Rules Governing Swimming.* The following safety precautions should be observed :

- (1) In indoor pools, lighting should be strong enough for objects to be clearly seen under water.
- (2) Surface along sides and edges of pools should not be slippery.
- (3) The rule of *no running and no games* on wet surfaces around the pool should be strictly enforced. This rule applies also to the entrance to the dressing room.
- (4) The diving boards should be located over water at least 8 feet deep and where there are no underwater obstacles. A diving board 10 feet high should be over water at least 10 feet deep.
- (5) Swimming in pools, rivers, or other bodies of water known to be unsanitary should be prohibited.
- (6) Swimming alone, except in emergency, should be prohibited.
- (7) Close supervision should be kept of trial swims, where participants' capabilities are not known.
- (8) Lifeguards should give especially close supervision to areas around diving boards and ladders and to semideep water where nonswimmers can readily get beyond their depth.
- (9) Diving into unfamiliar water should be prohibited.
- (10) Calls for help should never be uttered in fun.
- (11) Cold water should be entered gradually.
- (12) Sun bathing should be carried on with moderation. Bad burns require the attention of a medical officer.
- (13) Lifeguard stands should be reserved for lifeguards. Swimmers should not be permitted to converse with lifeguards.
- (14) Lifeguards should be well versed in swimming and life-saving and familiar with approved methods of resuscitation.

*f. Care in Case of Accident.* In case of accident involving a possible drowning, the person in charge will proceed as follows :

- (1) Rescue the victim.
- (2) Administer artificial respiration if necessary.
- (3) Send for medical aid.
- (4) Clear area where victim is lying of all persons not assisting the instructor.
- (5) Send for blankets and hot pads if necessary.
- (6) Notify the officer in charge at earliest opportunity.
- (7) Make a full report of the accident as soon as possible to the officer in charge of swimming.

*g. Reference Material.* Swimming instructors should make full use of Red Cross textbooks, instructor's manuals and guides, and test and certification material, which can be obtained without cost from the American Red Cross field director stationed at any post.

## 128. Classification of Swimming Ability

*a. General Classifications.* Personnel can be divided into three classifications in regard to swimming ability—nonswimmers, those having no swimming ability whatsoever; skilled swimmers, those who employ recognized strokes and styles of swimming comfortably and effectively; and novice swimmers, those between the non-swimmer and the skilled swimmer, at varying levels of aquatic skill. No estimate of the average number that will be found in each classification can be made, but it is safe to assume that a majority of each group will be either non-swimmers or novices. A program of swimming and water safety instruction suitable to the needs of each classification should be established and arranged so that, as they master the skills of each phase, learners can progress from one classification to another.

*b. Self-Classification.* A system of self-classification may be used in classifying a group. This method is effective and timesaving. In most instances it will eliminate the need for classification tests. The instructor announces that all non-swimmers will separate themselves from the group and form a unit of their own and that all skilled swimmers will form a similar unit. The group remaining will constitute the novices. In actual operation many novices at the lower level of novice skill will classify themselves as non-swimmers and some semiskilled swimmers will place themselves in the novice class. The tendency of the swimmer to underrate herself will prove helpful to the instructor.

*c. Classification Tests.* If time and facilities permit, classification tests should be used. The tests established by the Red Cross as criteria for the various classifications will prove helpful.

## 129. Organization

*a. Conformance with Safety Rules.* As a matter of safety it is wise to maintain a close check on the women while they are in the water. Colored caps to show the skill level of the individual are often used. For mutual aid and safety the "buddy" system described in the Red Cross lifesaving and water safety textbook should be adopted.

*b. Plans for Promotion.* Classes should be organized to permit the women to advance from one group to another as their skill increases. Tests should be used as a basis for promotion.

*c. Scheduling.* No formal program is suggested for recreational swimming and bathing. However, the use of scheduling to control the size of the group using the facilities at one time will increase the enjoyment of the participants.

## Section II. SWIMMING COURSES

### 130. General

It is recommended that the American Red Cross swimming courses be used since they furnish a tested and well-established course of instruction from the most elementary skills to very advanced activities.

### 131. Instruction for Nonswimmers

*a. Fundamental Principles.* The objective of the nonswimmer instruction to get the nonswimmer afloat and navigating under her own power. The rate of progress must be consistent with mastery of the fundamental principles of swimming which are best begun at this level. Methods described in the American Red Cross beginner's course should be followed in teaching these principles. These fundamental principles are—

- (1) Use of buoyancy.
- (2) Breath control and breathing.
- (3) Relaxation.
- (4) Balance.
- (5) Swimming and floating positions.
- (6) Fundamental propulsive strokes.

*b. Skills to be Achieved.* This course contains the following major elementary skills with tests—

- (1) Breath holding.
- (2) Rythmic breathing.
- (3) Prone float.
- (4) Prone glide.
- (5) Back glide.
- (6) Kick glide (on front).
- (7) Kick glide (on back).
- (8) Arm stroke (beginner).
- (9) Finning.
- (10) Combined human stroke (front).
- (11) Combined stroke (back).
- (12) Change of direction.
- (13) Turning over.
- (14) Jumping into waist-deep water.
- (15) Jumping into deep water.

*c. Results of Beginner's Course.* If the fundamental skills in support and propulsion have been acquired, the nonswimmer at the conclusion of the course should be able to remain afloat for a half hour or more and propel herself for a considerable distance.

### 132. Instruction for Novice Swimmers

*a. General.* Novice swimmers are those who have not had sufficient instruction and practical experience in the water, or who are self-

taught. They have not mastered the fundamental principles upon which effective swimming is based. At the same time, they have eliminated fear of water and do possess some crude aquatic skill.

*b. Fundamental Principles.* In order that the novice may learn the fundamental principles listed in paragraph 131a it is recommended that she take the American Red Cross beginner's course training.

*c. Skills to be Achieved.* The course content should not differ in detail from that given to nonswimmers. However, novices will usually accomplish the skills listed in paragraph 131b in a much shorter time than nonswimmers. As soon as the listed skills are mastered and fundamental objectives attained, the remaining class hours may be used for more advanced instruction. This instruction should consist largely of acquiring skill in the use of a recognized style of swimming on the front, such as the breast stroke or side stroke. This should be followed by learning the elementary back stroke as a relief or change-over style of swimming. Mastery of these strokes is fundamental to water safety training which should follow. Practice in swimming fully clothed and in the use of auxiliary flotation devices may be given to the novice group toward the conclusion of their training.

### **133. Instruction for Skilled Swimmers**

Skilled swimmers may have a more varied program. Lifesaving techniques should form a major portion of their program. Additional work on swimming strokes and some work on fancy diving may be included. Advanced courses set up by the American Red Cross are recommended for use.

## **Section III. LIFESAVING AND WATER SAFETY**

### **134. General**

*a.* Although lifesaving and water safety courses must be reserved for skilled swimmers, water safety instruction should be included at every level of swimming instruction. Certain water safety skills of value even to nonswimmers can be discussed and practiced on land.

*b.* Elementary forms of extension rescue should be discussed with all personnel at the beginning of the swimming season. The simple reaching with a hand or foot from a dock or edge of the water may be used to assist someone to safety. If a greater reach is necessary, a towel, an article of clothing, or a pole may be extended to the victim. A rope or ring buoy thrown to a victim gives still greater extension to a landbound rescuer. Supporting objects such as a board or a life preserver may be floated to a struggling victim to act as a support. It should always be emphasized that a swimming rescue is done as a last resort.

## 135. Artificial Respiration

Most of the women will have some knowledge of artificial respiration learned in first aid courses in basic training. The latest methods of artificial respiration should be reviewed and practiced. The current accepted method is the back-pressure, arm-lift method, as follows:



*Figure 77. Position of victim during artificial respiration.*

*a. Position of the Victim.* Place the victim in the face-down prone position, elbows bent, with the hands placed one upon the other. Turn face to one side, with cheek resting on hands (fig. 77.)



*Figure 78. Position of operator giving artificial respiration.*

*b. Position of the Operator.* The operator kneels on one knee at the head of the victim and facing her. The knee is placed at the victim's head close to the forearm; the foot of the opposite leg is near the victim's opposite elbow. If it is more comfortable, the operator may kneel on both knees, one on either side of the head. The operator's hands are placed on the flat of the victim's back so that the heels of the hands lie just below an imaginary line running between the victim's armpits. The tips of the thumbs almost meet, and the fingers are spread downward and outward (fig. 78).



*Figure 79. Compression phase of artificial respiration.*

*c. Compression Phase.* The operator rocks forward until the arms are approximately vertical, allowing the weight of the upper part of the body to exert slow, steady, even pressure downward upon the victim's lungs, forcing the air out. The operator's elbows should be kept straight and pressure exerted almost directly downward (fig. 79).



*Figure 80. Preparation for expansion phase of artificial respiration.*

*d. Preparation for Expansion Phase.* The pressure is released, avoiding a final thrust, and the operator rocks slowly backward. Her hands slide down the victim's arms to a position just above the elbows (fig. 80).



*Figure 81. Expansion phase of artificial respiration.*

*e. Expansion Phase.* The operator draws the victim's arms upward and toward herself. Just enough lift is applied to feel resistance and tension in the victim's shoulders. The operator's arms remain straight and as she completes her backward movement, the victim's arms are released. This completes the full cycle. The arm lift expands the victim's chest by pulling on the chest muscles circling the back and relieving the weight on the chest (fig. 81).

*f. Summarized Directions.* Artificial respiration must be started immediately. No time must be lost. The body of the victim should be inclined with head slightly lower than the feet so that fluid may drain more easily from the respiratory passage. To insure that there is no obstruction of the respiratory passage, the head of the victim should be extended and the chin should not sag. The operator should also check to see that the passage is not obstructed by the tongue or foreign objects. These precautions can be taken when placing the victim in position or shortly afterward between cycles. A smooth rhythm should be established in performing artificial respiration, but split-second timing is not essential. Artificial respiration should be applied at a rate of approximately 12 cycles per minute. Compression and expansion phases should be of about equal duration. Release periods should be of minimum length.

[AG 353 (28 Jul 55)]

By Order of *Wilber M. Brucker*, Secretary of the Army:

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*Chief of Staff.*

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*NG:* None.

*USAR:* None.

For explanation of abbreviations used, see SR 320-50-1.



